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ORIGINAL ARTICLES.

ON HORNY GROWTH OF THE PENIS.[1]

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JOHN B., aged sixty-two, a farmer, presented himself at the clinic of the Jefferson Medical College, on the 8th of October, 1886. He stated that he had upon his penis a horn, which had existed for more than four years, and which had originally grown from a wart. The wart was of some size, and at times itched greatly, and he was in the habit of rubbing it to relieve this disagreeable sensation. All that he could say of the growth was that the wart gradually turned into horn which slowly increased in size. It was, however, painless, and caused him no trouble, except that it mechanically interfered with coition.

On examination, a large, horny growth was found springing from the base of the glans, at the coronal border, and firmly attached both to the gland and to the prepuce. The horn was one and seven-eighths inches long, one and three-eighths in circumference at its base, and curved forward, tapering slightly, beyond the extremity of the glans. On the dorsum (Fig. 1), half an inch in front of the corona, a

FIG. 1.

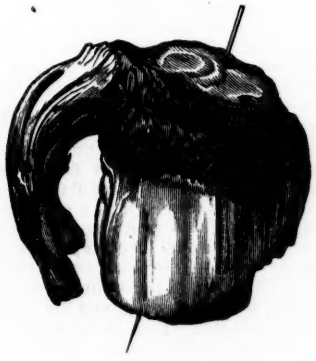

plate of horny tissue, varying in width from three-quarters of an inch to an inch, encircled the end of the glans, covering and destroying the frenum and its attachment, surrounding the meatus, and narrowing it to a pin's point; through this narrowed opening, impervious to any instrument, the urine escaped slowly, drop by drop. This plate of horn presented a longitudinally striated surface, somewhat like that of an uneven or exaggerated thumb-nail, and having, when dry, a smooth and polished appearance.

FIG. 2.

The under surface (Fig. 2) of the horn and of the horny plate, seen when the penis was laid against the belly, was uneven and jagged, seemingly composed of bundles or spiculæ of horny tissue, separated, and somewhat resembling short bristles. After amputation of the glans behind the corona, a No. 1 catheter could easily be passed along the urethra from behind, until abruptly stopped by the plate of horn above referred to. The corpora cavernosa were found to be normal.

The extent of the disease was so great, and the involvement of the urethra so complete, that amputation was considered to be indicated. The glans was therefore removed by an incision just behind the corona. The patient recovered rapidly, and was discharged from the hospital on November 2, 1886.

The microscopical examination of this growth was kindly furnished to me by Dr. Morris Longstreth. The first part examined, taken from the middle portion of the horn, appeared, when disintegrated with caustic potash and mounted in glycerine, to be composed of epithelial cells of the usual squamous variety. These cells were dry, shrivelled, closely packed, and difficult of separation, even more tightly united than in the structure of living nail. This general condition was more marked in the outer or external portions of the horn. In the flat or nail-like portion covering the dorsum of the glans the same cells were found, but they were more easily separated, individually less shrunken, and corneous in appearance, and many of them showed abundant granular contents. In short, no essential difference existed in the arrangement or character of the cells of the horn proper, and of the lamellar or nail-like, horny plates covering the glans. The seeming differences were of degree rather than of kind.

[1] Read before the Association of Genito-Urinary Surgeons, at the Annual Meeting at Lakewood, N. J., May 19, 1887.

The rarity of horny growths upon the penis is somewhat remarkable, and one is surprised to find only fourteen cases accurately recorded in English, German, and French reports. A few more instances are vaguely alluded to, but in such uncertain terms as to render them worthless for study. Confining ourselves, therefore, to the trustworthy descriptions of this affection which have reached us, we find, on comparison, a singular uniformity in their description.

Horns upon the penis occur in two forms. In the first, as well-marked, projecting horns; in the second, as rough, flattened, horny plates of greater or less thickness, occupying the surface of the glans penis. In several instances, as in that before us, both of these varieties are present. Where well-marked horns exist on the penis, their bases of attachment are usually the corona, the sulcus coronalis, or the mucous surface of the prepuce. These horns, at first sight apparently single, are often multiple, one horn predominating in height and size, while a range of very much smaller like growths extend laterally along the corona. The inguinal glands are frequently affected.

As to the age at which these developments take place, it would seem that they are most frequent in advanced life, from fifty to seventy years, or even later. In the case reported by Dr. Jewett, of Connecticut, in which the horn—the largest on record—was three and a half inches long, and three-quarters of an inch in diameter, the patient was twenty-two years of age. In the case reported by Pick, of Prague, in which the horn was two and a half inches long, the patient was also twenty-two years old. In one instance observed and figured by Demarquay, the age of the patient was nineteen and a half years.

These penile projecting horns are usually curved, and project over, or to the side of the glans, are truncated toward the extremities, and are striated or corrugated longitudinally, with a tendency of the fibrillæ to separate, or split lengthwise. In color, they vary from a whitish or ash-gray to a yellowish-brown, or black. They are most often painless, but by their growth, as one might naturally infer, at first mechanically interfere with, and as they increase in size later, prevent coition.

It is difficult to understand the causes, generally, of cutaneous horns; indeed, Hebra has remarked that it is scarcely necessary to study those causes which, so far, are clear to no one. Hartman characterizes their origin by the phrases "Lusus naturæ," and "nisus excrescendi." Yet so far as horny growths from the penis are concerned, it would seem that they may be caused by the irritations peculiar to their site. Thus, it will be seen by reference to the appended cases, that in many of them an actual source of local irritation existed. Thus, in six out of the fourteen, phimosis, either congenital or acquired, was present, and the horny growths usually supervened upon the operation for the relief of this condition. We have then the irritation of the deformity, the accumulating secretions and filth, and the irritation of the operation, surely enough to give rise to a papillary hypertrophy, sufficient for the development of flattened or horny growths, or protuberances. In other cases, the horny growths on the penis have followed, or been coincident with an epitheliomatous condition, and in nearly every instance have been preceded by a wart, accompanied by more or less itching. In some instances, the removal of the horns has been followed by the occurrence of epitheliomatous growths.

It will thus be noticed that in all the fully recorded cases there is a general, and, indeed, a strong family likeness as to origin and development of the growth in question. In the case I have reported, there is one peculiarity which I have not noticed in the other instances. It is this, that the anterior one-fourth of an inch of the urethra of my patient was almost entirely occluded by the horny formation, so as to a great degree to interfere with micturition. By examination of the specimen, this horny structure will be found to be abrupt, the normal calibre of the urethra being preserved until sharply arrested by the horny plate involving the meatus.

The *treatment* of these cases may be summed up in two words—thorough removal. If the horn be single, and its attachment be circumscribed, this can be done by including in the incision a sufficient amount of soft tissues. When, however, the base of the horn is broad, when it has extended widely, or is accompanied by epitheliomatous formations, or when the urethra is surrounded, and is constricted and compressed, it would seem better, particularly in old men, to remove the entire gland.

Appended will be found references to all cases of horny growths on the penis I have been able to collect.

CASE I.—Caldani (*Memoria della Soc. Italiana*, F. xvi. p. 125; *Meckel Archiv.*, 1851, p. 301. Lebert, Ueber Keratose, Breslau, 1864, p. 47). A man, aged seventy, previously healthy, experienced a sudden violent itching on the outside of the right varicose leg, which he scratched until it bled. Œdema and ulceration followed, here and there, which were healed at the expiration of two years. Soon after violent itching between gland and congenitally phimotic prepuce occurred, which in his efforts to assuage, he rubbed to bleeding. After some months, a soft, sensitive mass projected from the preputial orifice; the prepuce was slit up, the cancer-like mass removed, with a small portion of the glans, and then the entire prepuce was cut away, and the wound healed in a month. Three days after operation at the incised portion of the glans, a small, hard projection appeared, which was cauterized on the fourth and fifth days by the hot iron. It disappeared, and on the eighteenth day, on the same place, two other raised spots developed. These, and a third unusual growth, evident two days later, were cauterized, and the patient left the hospital fully healed. Five days afterward, in the centre of the scar, a white, hard, insensible body appeared, which in ten months developed into a large horn, bending over the end of the glans, in front of the meatus. The reporter adds that the after-march of this case, and its termination are unknown.

CASE II.—A. Richond-Desbrus (*Archiv Gèn. de Mèd.*, 1827, t. xv. p. 218. Quoted by Lebert, p. 48). A patient, sixty years of age, in 1825 presented for treatment. His glans penis was greatly swollen, covered with enormous, irritable bleeding vegetations. His prepuce, slit by a previous operation, was also tumefied, hardened, and covered by foul growths. The glans was covered with a black crust, and beneath this the glans

had degenerated into a white velvety tissue, which bled readily. He had never had any venereal affection. The vegetations and remainder of prepuce were removed, and surfaces cauterized. Fifteen days afterward the vegetations had returned, but operation was refused. In the next year he again presented himself; an enormous horn had now developed from the glans, similar in form, consistence, and color, to the other horn. On being burned, the odor was that of ordinary horn. Its external surface was hard, but the interior layers were friable and porous. The glans was twisted to one side, and urination was difficult. The centre was filled with a hardened caseous matter. The lymphatics of the right side were enlarged. Three months later, the irritation passed to the acute stage, the prepuce became red, hard, painful, and suppuration was established. Amputation was advised; he went up to Lyons for operation, and the reporter learned nothing further of his case. Of this patient, Lebert observes that "he probably suffered from cancroidal epithelioma of the glans, with horn complication, and that already a bubo, probably also of epitheliomatous character, existed, the issue of which is fatal. Had the patient been cured, the fact probably would have been published."

CASE III.—Breschet (*Dict. de Méd.*, t. ix. p. 113, quoted by Richond-Desbrus, and by Lebert) reports having seen on a very old man, one of his patients, horny layers, which sprung from the glans.

CASE IV.—Otto (*Seltene Beobachtungen, etc.*, Breslau, 1816, p. 109, quoted by Lebert) says that Dr. Ebers, hospital physician, some years since saw a man with a horn firmly attached to the glans. This horn was curved, and was greater and thicker than that described by Caldani.

CASE V.—Carrow (*Bulletin de la Société Anatomique*, t. xxix. p. 235. Quoted by Lebert) describes a horn growing from the prepuce of a forester, forty-five years of age. It was situated between the hinder border of the glans and the meatus, on the left side of the frenum, and occupied the top of the glans. The blunt upper surface was dry, wrinkled, and easily split. The horn, fifteen to eighteen lines in length, was irregularly prismatic and triangular; the point was directed under and backward, in relaxation of the organ. There was no pain, but coition had for some time been impossible in consequence of the resulting pain to himself and his wife. The horn had existed for two years, and was gradually increasing. The horn was thoroughly excised, and a few days thereafter the patient left the hospital. His further history is not given.

CASE VI.—Middledorpf communicated to his colleague Lebert the following case. A man seventy years of age, and for his time of life strong and well nourished, suffered ten years since from a commencing phimosis, for which no cause could be assigned. This increased to such an extent as greatly to impede micturition, and a year afterward the phimosis was operated upon. The wound healed badly, suppurated, and threw off crusts. Soon a hard, horny growth developed on the site of the excised prepuce, and increased so much in the region of the frenum that the patient cut it off piecemeal with the scissors; the upper part fell off sideways, but was reproduced. Upon the dorsum a horny growth took place at the seat of the former operation. Near the frenum, or rather on the whole under surface, a horny growth developed, formed of many single horny lamellæ cylindrically aggregated. When these plates split after the use of the scissors, the patient bound them together with a thread. He refused to be operated upon.

CASE VII.—Demarquay (*Maladies Chirurgicales de Penis*, 1877, p. 330), speaking of horny growths on the gland, says: "Sometimes the horny production is single, and this is the most frequent case; sometimes there exist on the gland a certain number of horny lamellæ, as in a case which presented himself, in 1869, in my service, and which is represented in Fig. 11 (figure given showing a series of small horns from one-third to one-half of an inch in length around the base of the gland). These excrescences appeared on the gland four months since, under the form of two little 'boutons,' which persisted despite the employment of powder and appropriate pommade. Soon the 'boutons' were transformed into appendages, which increased in number and volume, and assumed the appearance they offer to-day. According to the patient, a typhoid fever which he had, and which lasted two months, in no respect modified the condition of these excrescences."

CASE VIII.—Hebra (*Handbuch der Pathologie und Therapie*, II. Bd. S. 27. Quoted by Pick) refers to a case occurring in the clinic of Professor Schábus, in Klangenfurt. In this instance a horn four inches long, of the thickness of a little finger, curved and slightly bent to one side, sprang from the dorsum of the penis, probably of the glans, although this is not stated.

CASE IX.—Bergh (*Archiv für Dermatologie und Syphilis*, 1873, p. 186) refers to a case of horn growing from the "collum glandis," described by C. C. Siebold, in the *Ephem. Nat. Cur.*, vi., 1778.

CASES X AND XI.—Hessberg (*Inaugural Thesis*, Göttingen, 1868, quoted by Bergh (op. cit.) and Pick, *Vierteljahresschrift für Dermatologie und Syphilis*, 1875, 2, p. 320) refers to two other cases.

CASE XII.—Dr. P. A. Jewett, of New Haven, Conn., (*N. Y. Medical Times*, 1853, p. 79) reports the case of O. P. H., aged twenty-two, admitted to hospital at New Haven, August 2, 1846, for congenital phimosis, for which he was operated on, and discharged cured. On November 13, 1846, he was readmitted with extensive warty excrescences growing from the cicatrix caused by the operation for phimosis. These were treated for several weeks by caustic applications and active constitutional remedies, syphilis being suspected, but without benefit. The warts were then cut off; the wound healed well in a few days, and he was discharged cured. In the summer of 1848 the warts reappeared, and were removed at one of the New York hospitals. He was discharged well, and in three months again presented himself at the New Haven Hospital, stating that a few weeks after leaving the New York hospital he noticed on the glans a small, hard tumor, unattended with pain, but subject to paroxysms of intense itching, which continued to increase. At the time of admission to hospital, December 5, 1848, this growth presented all the appearances of a horn. It was light brown, lamellated, painless, and when burnt, as he was in the habit of doing to amuse the inmates, emitted the peculiar odor of horn. It measured three and a quarter inches in length, three-quarters of an inch in diameter at base, gradually tapering to a point. The only inconvenience was from its size and situation. It was removed by a simple incision, including the base of the horn and a portion of the glans penis. Four years after the operation there had been no return, and the organ remained perfectly healthy.

Villeneuve has reported seventy-six cases of horns, of which three were on the penis and glans.

CASE XIII.—Pick, J. T., Prof. in Prague (*Vierteljahresschrift für dermatologie und Syphilis*, 2, 1875, p. 315), reports the following:

April 13, 1874, J. W., day laborer, aged twenty-two, was admitted into general hospital at Prague, for a high grade of balano-posthitis, with congenital phimosis. The preputial orifice admits only a small sound, so that on urination the prepuce is distended, and between the prepuce and glans hard lumps and firm adhesions can be felt. A whitish, purulent fluid exudes from the preputial opening. Inguinal glands swollen and tender; no pain in urethra. No coitus has been had.

Psoriasis on scalp, and on extensor side of elbow, and knee-joint. Phimosis operated on, many preputial adhesions divided, and a number of condylomata removed from the corona, and sulcus coronalis. As healing took place, the swelling of the inguinal glands disappeared; the papilloma returned, and disappeared after removal and energetic cauterization. On June 26th patient was perfectly healed, and discharged.

Nine months afterward the patient returned, with horny growth (figured in two colored prints). He stated that two months after discharge from hospital, and after slight itching of that part of the gland where formerly the papillomata were, fresh warts developed, which hard at beginning, in six months increased to their present size. Had had no coitus since leaving the hospital, and no medical treatment. The horn, attached at the junction of the gland and prepuce, was embedded as a nail in its matrix; numerous other small club-like horns sprang from the base of the gland, pointing forward, and extending laterally in their continuity half way around toward the urethra. The large horn, which curved from the right side toward the left, overhung the gland, and when the latter was laid against the belly, presented an appearance not unlike that of the crest of a dragoon's helmet. The dimensions of the horn were, over its greatest convexity 9.5 centimetres; its diameter at base 3.5 centimetres; and diameter at the point 2.5 centimetres. Its color varied from yellowish-brown to black, and its hardness was that of a nail. The horn was removed, with its lateral attachments.

On examination in its long axis, the horn seemed to be composed of fibrillated layers, more densely packed or pressed together upon the outer or external, than at the central portions. On microscopical examination, the horn was found to be composed of compressed epidermic cells. In longitudinal section these were seen to be imbricated like roofing tiles; on cross section, they presented a concentric arrangement.

In the lower third of the great horn, in the spaces between the horn cells, bloodvessels existed; and at the base the horn-plates were continuous with normal epidermis.

CASE XIV.—Mr. Pearce Gould (*Br. Med. Journ.*, Feb. 19, 1877, p. 395) exhibited a specimen of horny growth on the penis to the Clinical Society of London. The patient, aged fifty, had had congenital phimosis. "He first experienced difficulty in micturition about four years earlier, and was circumcised; the wound healed, except in the middle line, where a small granulating surface remained; in connection with this surface, two small warts developed, from the earliest formed a discharge commenced, and continued up to the time he came under Mr. Gould's care. On the middle of the upper surface of the gland was a sessile truncated horn, of yellowish color, translucent, and of the size of a small marble. The penis was amputated, the inguinal glands removed, and the patient rapidly recovered. Microscopic sections of the horn, prepared by Mr. L. Hudson, showed the usual epidermal structure, the cells being flattened, nucleated, and in regular superposed layers; no enlarged papillæ entered the base of the horn; the ulcer was epitheliomatous; the glands showed no secondary deposits. Reference was made to Sir Erasmus Wilson's collection of 90 cases of horns, of which 5 were on the penis, and to the later collection made by Lebert of 109 cases, from various sources, of which 6 were on the penis.

"Mr. Gould also mentioned other cases, and stated that his specimen was the fourteenth recorded case of horn on the penis. Some of the horns had reached a great size; in one recorded by Mr. Jewett, the horn was 3½ inches long, and ¾ of an inch in diameter. In another case, recorded by Pick, the horn was 2½ inches long. In the case recorded by Mr. Gould, the patient was in the habit of paring the horn down. It had been shown that horns originated in three ways: from the interior of sebaceous cysts, which was the most frequent mode; from the matrix of nails, and from some change occurring in warts. Those on the glans penis belonged to the last group. Histologically they fell into two classes: the papillary and flat; the specimen shown was of the latter kind."

CASE XV.—In January, 1887, a man, C. C., aged fifty-three, presented himself at the clinic of the Jefferson Medical College of Philadelphia, during the service of Prof. S. W. Gross, with a horny nodular mass on the dorsum of his penis. Its removal was recommended, and assented to by the patient, who however did not return.

Sir Erasmus Wilson (*Medico-Chirurgical Transactions*, 1884, vol. xxvii. p. 64), refers to a paper by Mr. Lozes (*Mem. de l'Academie Royale de Médicine*, June, 1830), in which are reported three cases of horny growths on the glans penis.

Sir Erasmus adds, "In pursuing this inquiry, I have succeeded in collecting 90 cases, of which 5 were on the glans penis." These are most probably included in the foregoing list.

The following cases of horn upon the scrotum may also be referred to.

Lebert and Curling (*op cit.*, p. 50) (Testis, 1856, p. 503) refer to a specimen of cancer scroti, with a horn-like growth, ¾ of an inch in length, which was removed from a chimney-sweeper, and is preserved in the Museum of the College of Surgeons (No. 2469). The process, when very long, is occasionally twisted like the horn of a ram. Some curious excrescences of this kind are represented in the clever etchings of Mr. Wadd (Cases of Diseased Prepuce and Scrotum. Pl. x. xi. xii.).

THE RARER FORM OF PULMONARY CONSUMPTION.

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To anyone who has had a large experience among consumptives it is quite evident that all such patients may be divided into two distinct classes. To the first, and by far the largest class, belong those in whom the disease is local; or, in other words, those in whom the disease is primarily confined to the pulmonary organs, and the constitution is secondarily affected. The second class comprises those cases in which the disease consists primarily in a constitutional disintegration, and the lungs become involved secondarily.

It is not only necessary that these two classes should be separated from a pathological point of view, but it will also be found that the prognosis as well as the appropriate treatment for each class varies greatly.

The first class comprises those cases in which the disease is in most instances acquired; and the second those in which, so far as my experience goes, there is a strong inherited tendency to the disease, and those who have been delicate during their whole lifetime. The first class may be called a class of walking patients, for, as a rule, they are able to be up and about until within a comparatively short time before their death; while the second class of patients, which in most instances belong to the female sex,

are generally bedfast during the whole or at least during the later period of their affliction.

The preliminary diseases from which the second class usually suffer are malaria, uterine and ovarian disease, neuralgia, anæmia, etc., all of which probably depending indirectly, if not directly, on an impoverished condition of the blood and of the tissues. Again, in the second class, and contrary to what one would be led to expect from the general emaciation of the body, there is usually such a small amount of lung lesion present that the practitioner is frequently thrown off his guard and led to mistake the true nature of the trouble. It is well enough to be cautious in the diagnosis of phthisis when only a slight amount of lung structure is involved, but when we are confronted by a patient who gives a family history which is decidedly tainted with consumption or scrofula, who has only a slight cough, but is thin, has occasional night-sweats, a variable or a complete loss of appetite, is suffering from occasional amenorrhœa, or irregularity of the menstrual flow; who probably made an imperfect recovery from her last childbirth, and in consequence of which she is afflicted with occasional pelvic pains, and especially if, under these circumstances, she is one of the youngest of her parents' family, it is doubly important to be careful in pronouncing an opinion as to the non-phthisical nature of the case, although the physical signs may show nothing more than the distribution of a few moist *râles* throughout the lungs.

In order to make the difference between these two classes of cases more clear I will give an example of the first before presenting one of the second class.

CASE I.—J. B., aged forty, carpenter, has been coughing for nearly three years, expectoration is of a yellowish-green color and very profuse, especially in the morning, has had hæmoptysis, is losing flesh, has night-sweats, appetite variable, though usually good, tongue clean, never had malaria or rheumatism, and his evening temperature is 99°. Physical examination shows very little bodily wasting, impaired movement of left chest with slight flattening below clavicle of same side. Tympanic, dull sound on percussion over left apex in front, and dulness behind in same apex. Blowing respiration with creaking and crepitant *râles* in same region, some mucous *râles* distributed from here down to base. Right side normal. Diagnosis: Cavity surrounded by consolidation in left apex. This patient was placed under the external application of hot poultices, massage, inhalation of compressed and medicated air, together with hypophosphites, cod-liver oil, nutritious food, an open-air life, and in the course of two and one-half months there were audible no other abnormal physical signs in left apex than the cavity respiration, and a slight percussion dulness.

The following is the history of a patient belonging to the second class, or to the rarer form of pulmonary consumption:

CASE II.—Mrs. X., aged twenty-six, married four years, came under my professional care in June, 1886, at which time she complained of having a cold. The preceding December she gave birth to a boy, which was followed by rather intense abdominal pain, chiefly located in the right ovarian region. A month later she became hot and chilly, and subject to occasional night-sweats; she was losing flesh, and had some cough, but very little expectoration—the latter being light in color. She had no hæmoptysis before this time or afterward. She was very anæmic. Her appetite was poor, and her bowels irregular. Her menses returned for the first time since her confinement, the previous May. She had never been subject to rheumatism, but complained of an ill-defined pain through the body which had a special affinity for the right side of the head behind the ear. Examination of the uterus by an expert gynecologist showed that the pelvic organs were comparatively normal. She lost a brother from pulmonary consumption, and her father had hæmoptysis in his younger days, although he is quite well at present.

Physical examination showed not only a marked degree of emaciation of the chest, but also of the whole body. Impaired respiratory motion over the whole chest. Slight subcrepitation and an occasional click toward the end of inspiration, as well as prolonged expiration in left apex. No dulness, and the right lung normal. Temperature also normal.

At this time she received quinine, iron, strychnine, and atropine, and carbolic acid with respirator. In regard to food she was ordered to take a glass of milk every hour or two, eggs and beefsteak as much as she can possibly eat. A month later she had improved in appetite and in strength, had less cough and expectoration, and night-sweats had diminished. Menstruation occurred at the regular time. *Physical signs:* no *râles*, or clicks, and the prolonged expiration in left apex was the only remaining abnormal sound. In addition to the above-named treatment, I gave her oxygen and compressed air inhalations. She continued to improved in every respect, so far as rational signs could tell, but in the following August her menses disappeared never to return. In two weeks after the cessation of her menses she began to experience severe ovarian pain in the right side, which radiated upward and occasionally gave her intense gastralgia, vomiting, and diarrhœa. At or shortly before this time her chest signs, with the exception of a weakened respiration, were normal. Her temperature was also normal. She had a tolerable good appetite, and the night-sweats were very infrequent. For the ovarian difficulty she was treated by a specialist, but no medication succeeded in permanently relieving the pain.

Saw her again the last week in the following November, when she appeared somewhat worse. The pain recurred at more frequent intervals, and was reflected from her spine over the anterior right side of her chest wall. At this time, the physical signs were principally on the right side of her chest; some dulness in right apex, and blowing inspiration and expiration in both apices. Some coarse mucous râles in right apex, extending to third rib in front, and to apex of scapula behind. A few clicks in left apex. Morning temperature 101° Fah. We now began to poultice her whole chest. There was a strong sympathetic connection between the pain in the chest, and that in the ovary; when it existed in

the former region, it was absent in the latter, and *vice versa*. She often said that the application of the poultice relieved the pain in the chest, but gave her occasionally a temporary pain in the right ovarian region. And strange to say, in proportion as the rational signs disappeared in the chest, the pain in the ovary became worse. I also applied the constant current at this time, which seemed to be the only thing which had the power of giving her any promise of permanent relief from the pain. Indeed, its action in relieving both ovarian pain, and that in the chest wall, was frequently instantaneous, and I feel quite certain that it spared her from a great deal of suffering. Her temperature now became very capricious, and irregular. It was normal, or quite so, for a number of days in succession, and then rose at once to 100° and 101°.

She went home in the middle of last January, when her chest was free from râles, but the dulness had not subsided, and I did not see her again until the middle of the following March, when I found her decidedly worse. She coughed very much, and expectorated profusely. She had a poor appetite, night sweats, and a temperature of 101° and 102° Fahr., morning and evening respectively. The physical signs at this time were as follows: Dulness in both apices. Bronchial respiration in right apex, mucous and subcrepitant râles distributed over the whole lung, as well as some mucous râles in left lung. Sensation and motion were normal throughout the whole body. I now, in addition to the other treatment, began the administration of sulphuretted hydrogen gas, according to Dr. Bergeon's method, twice a day. She thought that the gas relieved her cough and expectoration somewhat, but she was evidently beyond human aid, and died at the close of March.

This case is interesting from more than one point of view. Most deaths from chronic phthisis are caused by an extensive waste of lung tissue; but in this case there was no destruction of lung tissue; no cavity, and hence only a moderate amount of interference with the process of blood-aëration, insufficient of itself to produce death. Unquestionably, however, the disease in the lungs would have gone on to excavation, had she had vitality enough to live longer, under these circumstances; but at the time when the pulmonary organs became definitely involved, her constitution was already shattered to such a degree that there was nothing left to offer any decided resistance to the ingress of the disease, and she died from sheer constitutional exhaustion.

It also teaches an important lesson in regard to the line of treatment which ought to be followed, not only in such, but in all other cases of pulmonary consumption. As has already been intimated, it shows the powerful influence which the constitution sways over the destiny of the consumptive patient. Had the efforts to restore her general condition been successful, there can be no doubt that the case would have terminated favorably, for at no time up to within two months of her death, and probably later yet, was there sufficient pulmonary trouble, considered by itself, to give cause for serious apprehension. Hence, in these cases especially—although we must never lose sight of the great importance of local medication—the constitutional treatment is paramount to everything else. To attain this end, there can be no doubt that good nutritious food is the great desideratum, and all treatment must be subordinate to this aim in these cases. Food must be supplied regularly, and in such a way that the patient does not realize that he is in any manner forced to eat. All consumptives eat best when they are surprised by new foods. Variety gives them a relish which a monotony of dishes could not possibly excite. When the appetite flags give tonics such as nux vomica, tinct. of iron, hypophosphites, quinine, etc. Nothing that offers the least hope of doing good to these patients should be left undone. Change of air and of scenery, forced feeding, and when the anæmia is extreme, the subcutaneous injection of defibrinated human blood, as successfully practised by Prof. von Ziemssen and others, all suggest themselves as being of the greatest advantage in this special class of cases.

A STUDY OF THE PHENYL-HYDRAZIN TEST FOR SUGAR IN URINE, AS APPLIED BY ULTZMANN.

BY A. K. BOND, M.D.,
OF BALTIMORE, MD.

ALTHOUGH the determination of the presence or absence of grape sugar in urine is, as a rule, easy, yet we find now and then cases in which it is extremely difficult to decide by means of the ordinary tests whether the results which we obtain are caused by grape sugar or not.

The fermentation test and the polariscope are unreliable where the percentage of sugar is very small. The reduction tests, the best of which is that of Fehling, are reliable in all cases as *negative* tests—when no reduction is effected no sugar is present; but, as *positive* tests, they fail when the amount of sugar is very small, for, in this case, the results may be due to other reducing substances in the urine. It is with pleasure, therefore, that we read of the introduction of a test of an entirely different order which promises to be a certain *positive* test for sugar in the urine. I refer to the phenyl-hydrazin chloride test, which was introduced by Emil Fischer,[1] and has been applied to the examination of pathological urine by P. Grocco,[2] and by R. von Jaksch.[3]

In this phenyl-hydrazin chloride test the sugar itself is obtained in a crystalline compound, the formula of which is $C_{18}H_{22}N_4O_4$. This compound, which Fischer names phenyl-glukosazon, appears in the form of a yellow sediment which, under the microscope, is seen to consist of fine yellow needles. According to Fischer phenyl-glukosazon is not affected by watery solutions of alkalies. Suspended in warm water, it reduces alkaline copper solutions energetically. It dissolves in hot alcohol, and crystallizes out, when water is added, in the form of yellow needles. Heated to 204°C., it melts to a

[1] Berichte der Deutsch Chem. Gesellsch. zu Berlin, 17, 579.
[2] Annali di Chim. appl. alia Farmacie, 79, 258.
[3] Mittheilungen des Wiener Med. Doctoren-Collegiums, 10 Band. See, also, his book, Klinische Diagnostik Innerer Krankheiten.

dark red liquid, and at a higher temperature it is decomposed. Crystals, resembling those formed by glucose, are obtained from other members of the sugar group—levulose, galactose, sorbin, milk sugar, and maltose—but I find[1] that of these only levulose and milk sugar are ever found in the urine. Levulose is found only when dextrose is present, and milk sugar only during the course of the so-called milk fever. All observers agree that these sugars are the only substances which, under the conditions present, yield such crystals. The studies of Fischer, Grocco, and Jaksch have made this test an extremely valuable one in the hands of skilled investigators and chemists, but the addition of water to the urine interferes with the exactness of the results, and the use of the water-bath is quite unnecessary.

It is my purpose in this paper to describe a simple and rapid mode of using this test, which I learned from Professor Robert Ultzmann at his clinical lectures in Vienna, in the winter of 1885–86. I do not think that Dr. Ultzmann has yet published anything upon the subject, but the matter is of such importance that I do not hesitate to quote his words.

My notes upon his lectures are as follows: "It is a very simple test, and the most exact of all. Put into a test tube 1 cm. high of the phenyl-hydrazin chloride, and upon it 1 cm. (a little less than this) of crystals of sodium acetate. Then add urine to the half-test tube. Boil the mixture till it becomes clear. Let it stand for fifteen minutes, and examine the sediment for crystals. If albumen is present, you must first coagulate and filter. The urine must be clear. If there is no sugar, we find no such crystals. These crystals are in yellow sheaves, unlike any other product which appears in urine. Tyrosin gives crystals of a somewhat similar shape, but they are not yellow, and appear in urine only on rare occasions, as in acute yellow atrophy of the liver. This tyrosin, too, is a natural, not an artificial, product. Leucin, which has at times a somewhat similar shape, is unlike in color.

"This method is also useful for determining approximately the *quantity* of sugar in the urine."

Here, then, was a method which seemed in simplicity and accuracy to be exactly what is needed for the practising physician's use.

I procured some of the phenyl-hydrazin chloride in Vienna, and since my return from Europe I have made a very careful study of the test as applied by Ultzmann (for convenience, I shall speak of it as "Ultzmann's method"). The result is that I fully endorse his recommendation of it, although, in some respects, my experience has been different from his.

In my experiments I have used no appliances save those which are within the reach of every physician. Yet, in determining the sensitiveness of the test, I have exercised the greatest care in the preparation and measurement of my standard solutions of sugar.

I make the test as follows: I pour the phenyl salt—which is a dry substance resembling bran—into an empty test-tube until the tube is filled to the distance of about four-tenths of an inch from the bottom, and add crystals of sodium acetate, ground fine, to an equal height. Upon this I pour the urine—clear or cloudy—until the tube is half full. This gives in a test-tube five inches long, about the following proportions in weight: 1 part phenyl salt, 2 parts sodium acetate, 15 parts urine. I shake the tube until the crystals of sodium acetate are dissolved, then heat gently over a low flame until the mixture boils, and boil it for about half a minute—whether it becomes clear or not makes no difference. I then cover the tube and let it stand, and, after a proper interval, examine the sediment with the microscope. If sugar is present there will be seen first fine, bright yellow needles, which branch out or are joined by others as they are formed, until the field is dotted with groups like delicate sprays or sheaves, or radiating from a centre. A magnifying power of 200 diameters is sufficient for this study. That the phenyl salt is always in excess when the test is made in this way is shown by the constant presence of reddish globules in the field.

My experiments fall naturally into two series. The first series includes those made for the purpose of finding how long the mixture must stand before the crystals appear; of determining what percentage of sugar is necessary for the formation of the crystals; and of comparing this test, as simplified, with Fehling's test, which I believe to be the best heretofore in use. For this series I used, instead of pure grape sugar, which cannot easily be weighed, a crystalline compound of sodium chloride and grape sugar, which is easily weighed. A solution of this salt in distilled water (containing, by calculation, 1 part of anhydrous glucose to 1250 of water) gave, by Ultzmann's method, after standing eighteen minutes, a sediment in which, by the aid of the microscope, the crystals could be seen grouping themselves into delicate, spray-like forms. The same mixture yielded, twenty-one hours later, a yellow sediment, which was seen, with a one-inch objective as a hand-lens, to consist of feather-like groups of yellow, needle-shaped crystals. Under the microscope abundant sheaves of yellow crystals were seen. A mixture containing 1 part of sugar to 2000 parts of normal urine, which gave a fair reaction for sugar by Fehling's test, yielded, by Ultzmann's method, on standing twenty-two hours, four or five large yellow sheaves to a field of the microscope, and after it had stood forty-eight hours, about a dozen sheaves to a field. Mixtures containing 1 part sugar to 3000 or 4000 parts normal urine, which gave, with Fehling's fluid, very uncertain tests, yielded, by Ultzmann's method, after twenty-two hours, no crystals; but twenty-three hours later, several well-formed sheaves to a slide. It is possible that still more dilute solutions of sugar in urine might yield the crystals when treated in this way, but for ordinary office-use greater accuracy than this is not needed.

The second series includes those experiments made to determine whether, under any circumstances, the test, as applied by Ultzmann, fails to give the crystals in urine which contains more than one-fortieth per cent.—1 part to 4000 parts—of

[1] Neubauer und Vogel, Analyse des Harns, 1881.

grape sugar. In these experiments I used solutions of known strength of very pure grape sugar in distilled water. I treated by Ultzmann's method in all fourteen mixtures of these standard solutions with fresh, non-saccharine urine containing from one-thirty-sixth to one-half per cent. grape sugar, and obtained the yellow crystals in every case. In eleven of them the crystals appeared within twenty-four hours after the test was made; in three of them when the mixtures had stood more than twenty-four hours. Several of these fourteen mixtures were made with urine which threw down phosphates on boiling; one with urine which yielded, on standing before tested, a very abundant sediment of urates; one with urine containing a considerable quantity of albumen—the yellow crystals in this case in part appearing in the masses of coagulum, in part settling from the supernatant fluid in the form of sheaves; one with urine to which I had added quite an excess of sodium bicarbonate, to find whether alkalinity of the urine interferes with the test—in this case brisk effervescence occurred from the action of the bicarbonate upon the phenyl salt, but, as the latter was in excess, the solution continued acid and the crystals appeared, though in smaller numbers than usual.

These tests with artificial solutions of glucose in urine were confirmed by similar tests with the urine of patients suffering from diabetes mellitus.

Many tests were made with normal urine, but in none of them could I find even a single yellow crystal or sheaf.

Through the kindness of a medical friend, I had the opportunity of testing, by Ultzmann's method, a very interesting specimen of urine[1] which contains a substance which was mistaken for sugar by several life insurance examiners. This urine behaved with the phenyl-hydrazin test exactly like normal urine.

In the sediment from a solution of sugar in hydrant water, tested by Ultzmann's method, a yellow plant was found under the microscope, which in its very earliest stages resembled somewhat in color and form small sprays of sugar crystals. Upon further observation, however, the peculiar manner of growth of the plant removed all doubt upon the subject. This plant was not found in any of the urine mixtures.

I will now state briefly the results of my work:

The test of Fischer, as applied by Ultzmann, is easy to make, and does not take more time than Fehling's test, if, as is necessary, the latter be made with fresh solutions.

It is suitable for office use by physicians, and may be accurately made by those whose training in chemistry is imperfect.

It does not require great skill in the use of the microscope. In all my examinations the crystals, if present, were found upon the first slide examined.

When the sugar present amounts to one-fifteenth per cent., the crystals may be found fifteen minutes after the test is made.

The test is about as sensitive in the presence of sugar as that of Fehling, and is not liable to be disturbed by other substances contained in the urine. It is obtained in alkaline as well as in acid, in cloudy as well as in clear urine.

Normal urine does not respond to the test.

If the crystals are found, the proof of the presence of sugar is absolute.

My experiments lead me to believe that in *all* cases in which sugar is present in the urine to the amount of one-fortieth per cent. or more, the crystals may be found—although it may be necessary, when the quantity of sugar is very small, to let the mixture stand after boiling as many as forty-eight hours.

The single crystals show a strong tendency, in the most dilute as well as the most concentrated solutions of sugar, to form clusters; so that, in solutions which have stood some time, only the characteristic clusters may be found.

The crystals or clusters undergo no change of importance in aqueous solutions for a month or more, and so any sediment may be preserved and inspected from time to time. Even in urine mixtures they remain for weeks unchanged, decomposition of the mixtures being prevented by the phenyl salt.

Ultzmann's method may be used for rough *quantitative* determinations. In case the urine contains one-tenth per cent. or more of sugar, we may estimate the amount from the quantity of yellow crystalline sediment, even when the urine is not clear. When less than one-tenth per cent. is present, the amount may be roughly estimated from the number of crystals in a field of the microscope.

The salt of phenyl-hydrazin used for the test is quite stable, retaining its properties for months (apparently for years), even when exposed frequently to the air.[1]

[1] Described by Dr. Bruen, Boston Med. and Surg. Journal, December 30, 1886, and January 27, 1887; and by Dr. Marshall, THE MEDICAL NEWS, January 8, 1887.

A CASE OF VENOUS ANASTOMOSIS ON THE DISK.

BY CHARLES W. KOLLOCK, M.D.,
OF CHARLESTON, SOUTH CAROLINA.

CASES of this kind are rarely seen, and the only one of which I have seen a report is that of Dr. B. Alexander Randall, in THE MEDICAL NEWS of September 11, 1886.

This anomaly occurred in the right eye of Miss A. B. The disk shows no signs of inflammation, but at the upper border of the disk a distinct connecting branch is seen between the superior nasal and temporal branches of the retinal vein. The patient has had trouble for years with her eyes, owing to errors of refraction and granular lids. Her general health has also been poor, and she is at present quite anæmic. With the following correction she sees $\frac{20}{xx}$. R. —0.75c. 30° ○ + 0.75c. 120°. L. —0.50D.

A choroidal ring, more distinct on the nasal side, surrounds the disk.

[1] Phenyl-hydrazin chlor. hydrat. may be obtained from Eimer & Amend, 205 Third Avenue, New York.

MEDICAL PROGRESS.

THE PHYSIOLOGY OF BERGEON'S ENEMATA.—At a recent meeting of the French Academy of Sciences, BERGEON read a communication in which he stated that carbon dioxide when introduced into the intestine was eliminated by the lungs in a manner similar to the diuresis of fluid through the kidneys. He stated that the tissues thus become impregnated with it. Pure gas was eliminated by the lungs; impure gas remained in the intestine, causing distention and colic.—*Gazette Hebdomadaire*, No. 26.

TOTAL EXTIRPATION OF THE CANCEROUS UTERUS.—DR. FRITSCH has recently published in the *Archiv für Gynäkologie* a communication on sixty cases of removal of the uterus through the vagina for cancer, the condition for which alone the operation is indicated. 7 out of the 60 patients died after the operation, a mortality of 11.6 per cent. 2 died from hemorrhage, 1 after syringing the vagina, 3 from peritonitis, and 1 from ligature of the left ureter. In the last case the kidneys were contracted. Of the 53 survivors from the operation, 17 had died already from recurrence, in 6 still living recurrence was reported by competent observers, 3 patients had not been heard of since their discharge, and 3 were only operated upon in September and October, 1886. 24 remained in good health, 9 of these being reckoned as cured, two years having passed without recurrence.

Dr. Fritsch does not agree with Ruge that three distinct forms of uterine cancer exist—cancer of the body, cancer of the canal of the cervix, and cancer of the surface of the vaginal portion. The last two forms are not always to be distinguished from each other. In both, Dr. Fritsch observes, the disease always begins on the boundary line between the squamous and the cylindrical epithelium. It is more important to divide cervical cancer into the exuberant or hypertrophic fungating form of the exedent, or rapidly ulcerating type.

Dr. Fritsch objects to supra-vaginal amputation of the cervix; first, because in some cases of cervical cancer nodules have been found in the fundus; secondly, because the operation is liable to be followed by severe atresia; and, lastly, because hemorrhage cannot be so readily controlled as during total extirpation. The operation, Dr. Fritsch observes, should only be performed when a permanent one appears probable. The uterus must be freely movable. When its mobility is impaired, cancerous deposit in Douglas's pouch or in the broad ligaments will almost certainly be discovered. The fungous type is the least serious, provided that the vaginal mucous membrane is not involved. On the other hand, in cancer hardly visible at the os externum, the parametric tissue is often extensively infiltrated. Dr. Fritsch is opposed to preliminary scooping out of diseased tissues or other partial operations, which, in his opinion, disturb the lymphatics and promote the spread of the disease.

With regard to the stages of the operation, as performed by Dr. Fritsch, his principle is to keep the peritoneum open for as short a period as possible, and not to lay it open till the most difficult steps have been performed, and to get the uterus as freely movable as possible by detachment of broad ligaments from their lateral inferior connections, so that the operator may know in time if really total removal of the growth is possible. Should the parametric tissues be found to be involved, the surgeon must proceed no further. Dr. Fritsch neither sews up the flaps nor drains; he plugs the vagina with iodoform. The greatest difficulties are encountered when the uterus is large. Dr. Fritsch has in these cases combined abdominal section with the vaginal operation. He does not believe that the patient need lie in any particular position after operation; the scanty secretion from the wound can be removed by pledgets of iodoform gauze. After recovery, a smooth and straight scar in the vault of the vagina is more favorable than a hard funnel-shaped cicatrix. No doubt, timely performance of total amputation of the uterus through the vagina promises the best results, as uterine cancer does not appear to recur rapidly when completely removed. The operation, however, is difficult and tedious even for experts.—*British Medical Journal*, June 25, 1887.

SPARTEINE, A HEART STIMULANT.—LANGGAARD reports the following formulæ, which he found useful in eighteen cases of heart diseases:

℞.—Spartëin. sulph. . . . . gr. 6.
Pulv. rad. liquirit.
Succ. liquiritæ . . . . āā q. s.
Ft. pil. 20 in num.
Sig.—One or two pills from two to four times daily.

Also

℞.—Spartëin. sulph. . . gr. 3 to gr. 7.
Aq. destill. . . . ʒ 2½.
Solve.
Sig.—Twenty drops, from two to four times daily, in sweetened water or wine.

℞.—Spartëin. sulph. . . gr. 3 to gr. 7.
Syr. aurant. cort. . . ʒ 12½.
Solve.
Sig.—A small teaspoonful in water, from two to four times daily.—*Therapeutische Monatshefte*, June, 1887.

THE USE OF COCAINE IN HAY FEVER.—SIR ANDREW CLARK describes his method in the *Lancet* of June 11, 1887, as follows: "There are three ways of using cocaine in the local treatment of hay fever: it may be used in the form of a solution, of a spray, or of a nasal bougie. Personally, I prefer to use a solution varying in strength from five to fifteen per cent., and I apply it to the interior of the nose and the back of the soft palate by means of a large camel-hair pencil attached to an aluminium shank, and bent at an appropriate angle. For use in the form of nasal bougies, a quarter of a grain or more of the hydrochlorate of cocaine is dissolved in a mixture of gelatine and glycerine, and made of different weights and shapes, according to the peculiarities of the case on which they are to be employed. For using cocaine in the form of spray, some efficient and ingenious spray producers have been invented. Many of them are furnished with nozzle so constructed that the spray can be applied directly to almost any part of the nasal and pharyngeal cavities. These spray producers, with weak cocaine solutions, are sometimes very useful in allaying the small but still troublesome irritation

which, in the intervals of the hay-fever paroxysms, are apt to arise in the eyes and mouth."

THE EUCALYPTOL TREATMENT OF PULMONARY TUBERCULOSIS.—At a recent meeting of the Academy of Medicine of Paris BALL reported 21 cases treated by hypodermatic injections of eucalyptol; 6 died, 10 were much improved and left the hospital, 5 remained under treatment. The influence of the drug was the lessening of night-sweats, diarrhœa, expectoration, and fever; and tubercle bacilli disappeared.

DUJARDIN-BEAUMETZ reported that in his hands the remedy lessened expectoration, but did not influence the bacilli.

GUIFFERT, of Cherbourg, had treated 5 cases with marked general improvement. He mentioned 2 cases which Bergeon's treatment failed to benefit, which the treatment under discussion greatly relieved.—*L' Union Médicale*, June 11, 1887.

THE TREATMENT OF HEPATIC CONGESTION.—JULES CYR is quoted by the *Revue de Thérapeutique*, of June 15, 1887, as using the following treatment:

1. Application over the liver of compresses of cold water, often renewed; two or three leeches about the anus.

2. At evening, three-fourths of a grain of calomel should be taken, followed the next morning by five drachms of Glauber's salts.

3. As beverage, milk and Vichy water, or seventy-five grains of ammonium chloride in a quart of water.

4. A douche, while the patient is reclining, of water at a pleasant temperature, given over the hepatic region.

THE TREATMENT OF HÆMOPTYSIS.—From an extensive article by BARIÉ, in the *Revue Générale de Clinique et de Therapeutique* of June 16, 1887, we take the following useful formulæ:

Tannin is a remedy most frequently used; its dose is from 9 to 15 grains; or by tablespoonful doses of the following:

℞.—Tannin	gr. 8 to gr. 15.
Tinct. cinnamon.	♏. 30.
Syrup. simp.	℥ss.
Aquæ aurant. fl.	℥ss.
Aquæ	℥xxv.

If gallic acid be preferred to tannin, it may be combined with ergotin as follows:

℞.—Acid. gallic.	gr. 30.
Ergotin	gr. 15.
Glycerin.	gtt. 5.
Syrup.	q. s.

Make 20 pills.

5 pills should be taken daily. In cases where the use of krameria or ratanhia with ergot and digitalis is indicated, the following will be found useful:

℞.—Ext. ratanhiæ	℥i.
Ergot.	gr. 45.
Digitalis pulv.	gr. 8.

To be made into 40 pills, of which 6 may be taken daily.

THE FREQUENT OCCURRENCE OF DISEASE GERMS IN THE HUMAN BODY.—In discussing the investigation of scarlatinal infection now in progress in England CROOKSHANK remarks as follows in the *Lancet* of June 25, 1887:

"We must bear in mind, in connection with this subject, that saprophytic organisms may occur in man, both in health and in disease, which produce very characteristic symptoms in the lower animals.

"If they gain access to the circulation through some surface lesion, they may, in an advanced state of disease especially, escape disintegration and be detected in the blood and in the organs after death. Thus they may readily be mistaken for the specific organism, if there be one, of the disease in question. We may also find more than one organism associated with a disease as the result of a double infection. Kassowitz and Hochsinger found in the organs of children which had died of congenital syphilis streptococci, which were regarded as the result of *Mischinfection*. It is interesting also to recollect how commonly streptococci have been met with. In addition to those I have already mentioned, we must bear in mind the streptococci in purulent inflammations found by Ogston, Rosenbach, Krause, Garrè, Hoffa, and Biondi, the streptococci found by Weichselbaum in acute pneumonia, the streptococcus isolated by Nicolaier from earth, the streptococci found by Emmerich in the air, and, I may add, the streptococci found by Babes in the liver and kidney in two cases of yellow fever; in the liver, kidney, and spleen in a case of *fièvre typhoïde bilieuse*, and in inflammatory products consecutive to scarlatina, by Bokai and by Babes in joint affections after scarlatina, and by Charrin in septicæmia consecutive to anthrax in rabbits. In conclusion it is obvious that the experiments which have been analyzed must be repeated and extended before a definite opinion can be expressed: and as in addition to its pathological interest the inquiry involves a question of national importance, it is to be hoped that a commission will be appointed. By testing the result of inoculating blood from human scarlatina direct into the calf and the monkey, and by repeating and extending the experiments of Dr. Klein and Dr. Edington, there ought to be no difficulty in dispelling the present contradictions."

MILK DIET AND THE EXCRETION OF UREA.—CHIBRET reported to the French Academy of Sciences the results of a series of observations of persons upon milk diet, as follows: Examination by means of sodium hypobromite, of the urine of such persons, showed a great increase in the amount of urea excreted; the diet had been rigorously followed two months. The urine of a person in health was compared with that of two patients upon milk diet by means of diagrammatic curves; it was found that a solely milk diet increased the excretion of urea from sixty to one hundred per cent.; when milk formed only a part of the diet the percentage of urea was thirty-five. As one of the patients, who was obese, lost flesh, while the other, who was thin, gained flesh upon this diet, it is evident that the increased excretion of urea was not caused by denutrition.

The increase and loss of flesh corresponded to the variations in fat and glycogen in the two patients, and not to any variations in urea.—*Revue de Therapeutique*, July 1, 1887.

COCAINE AND ATROPIA FOR IRITIS.—GUIAITA gives the following as used by many ophthalmologists:

℞.—Cocain. hydrochlor. . . . gr. 3.
Atrop. sulphat. . . . . gr. ¾.
Acid. boric. . . . . gr. 4.
Aquæ destillat. . . . . ℥2½.

—*L'Union Médicale*, June 25, 1887.

THE TREATMENT OF MORPHIA-CRAVING BY SPARTEINE AND NITRO-GLYCERINE.—DR. JENNINGS, of Paris, writes to the *Lancet* of June 25, 1887, an article on this subject whose conclusions are as follows:

"To sum up, the morphia-craving is a complex suffering, at the same time cerebral and peripheral, each factor of which can be relieved by appropriate treatment. The organic distress may be soothed by sparteine, which recovers the heart in the same way as a hypodermatic injection of morphia. The cerebral craving (or yearning), often the more painful of the two, corresponds to a want of habitual congestion. This can be arrested with nitro-glycerine, which gives rise to the same kind of sensation in the morphia *habitue* deprived of his stimulant as the hypodermatic injection. It acts probably by inhibition *á distance* rather than by essential sedation of the nervous centres."

PREPUTIAL CALCULI.—From the *Indian Medical Gazette* of April, 1887, we take the following account of an unusual case:

A ryot of Myoor, æt. forty-five, came to the Chingleput Dispensary to be relieved of difficulty in passing his urine.

He stated that his troubles began about four years ago, with phimosis, and, being unattended to, the preputial orifice gradually became smaller, with increasing difficulty in micturition.

The urine collected within the prepuce, distended it into a bag, and had to be squeezed out through the minute orifice, which did not admit the probe easily. On handling the prepuce, urinary calculi could be felt rubbing against each other. The penis was about one and a half inches longer than normal, curved somewhat downward; and the calculi were felt in front of the glands. The prepuce being slit up, three large calculi dropped out, of the size of average carpal bones. They were moulded to the shape of the preputial cavity, and were marked by facets.

He was discharged cured in five days.

The noteworthy circumstances in this case are the large size of the calculi, their unusual location, and the length of time that had been allowed to elapse before relief was sought. They were to all appearance phosphatic.

MERCURIAL INJECTIONS.—A discussion has recently been taking place in the Brussels Medical and Scientific Society as to the relative advantages of mercurial injections and inunctions combined with internal medication. Dr. Thiry prefers the latter method, as he thinks injections are attended with serious risks and inconveniences. M. Ed. de Smeth, on the other hand, practises injections largely—in fact, always—when mercury is indicated in syphilitic patients. At present there are in his wards 24 such cases in which no less than 900 injections have been given without any accident occurring; and M. de Smeth thinks that, as, apart from his own practice, M. Martineau has reported a series of 180,000 injections without any accident, Lewin 300,000 with 20 abscesses, and Paikert 5000 without any, it cannot be said that this form of treatment is more liable to inconveniences than other forms. He points out that there is a great difference between injecting insoluble salts, as calomel and the yellow oxide, in the way recommended by Scarienzo, upon which method M. Thiry's experience of injections was mainly gained, and injecting soluble salts, which is the plan he himself prefers and follows. Here, he says, the only objection to the injections is that the patient must be regularly seen by the doctor, which in private practice is sometimes inconvenient. Of course care must be taken that the syringe is perfectly clean and that the liquid is well filtered. In order to illustrate the occasional importance of the rapid action which can only be obtained by the method of injecting soluble salts of mercury, M. de Smeth mentions a case of syphilitic laryngitis of so urgent a character that it was thought that laryngotomy would be needed. However, by means of hypodermatic injections repeated five or six times during the course of twenty-four hours all danger was averted.—*Lancet*, June 25, 1887.

THE TREATMENT OF ECZEMA OCCURRING AT THE CRISES OF LIFE.—CHÉRON advises the following treatment, in the *Revue de Thérapeutique* for June 1, 1887:

1. At each meal a teaspoonful of the following:

℞.—Sodii arseniat. . . . . gr. ¼.
Aquæ destill. . . . . ℥ 4¼.

2. Constipation should be relieved by a saline purgative, generally citrate of magnesia, taken twice weekly.

3. An application should be made every evening of the following salve, used very gently:

White precipitate . . . gr. 15.
Vaseline . . . . . ℥ 5.
Essence of roses . . . gtt. 2.

4. Every eight or ten days the following hypodermatic injection should be given:

Nitrate of pilocarpine . . gr. 1½.
Aquæ destill. . . . . ♏ 75.

An injection of from six to ten drops.

Contra-indicated in disease of the heart or great vessels.

THE EFFECT OF ESSENCES UPON BACTERIA.—In the *Annales de l'Institut Pasteur*, No. 4, April 2, 1887, M. CHAMBERLAND examines the action of essences on the bacteria of charbon, and on many other less well-known microbes. The number experimented upon was 115; only fourteen allowed the development of the charbon bacillus in yeast-water saturated with their vapor. Among these was essences of cloves, which is sometimes used to arrest dental caries. But out of 102 essences that by their presence prevent the development of the organism, only eight seem to kill it definitively, for it usually revives as soon as the essences have evaporated. The essence of cinnamon alone appears completely to destroy the germs in four days, whilst bacteridian germs placed in fresh yeast-water

have been cultivated after having been for four days in contact with other essences. Essence of China cinnamon does not stop the development of filamentous bacteria, but essence of vespetro seems to kill it completely in eighteen hours. Placed in contact with carbuncle bacillus or its germs, in solution (essence ½ cc., alcohol 10, saponine solution at 1-100th 20, water 70), seven essences kill that bacterium in doses varying from 1-13, 200th, to 1-24, 200th. These essences have about the same antiseptic power as sulphate of copper. Among these seven essences are three of great antiseptic power, either in solution or in vapor; essence of China cinnamon, of Ceylon cinnamon, and of origanum. The essence must be used fresh; when they become oxidized by exposure to air, they lose part of their properties. M. Chamberland next compares the antiseptic action of thymic acid and of different salts upon bacteria. The bichlorides of mercury, and of ammoniac and sulphate of silver, act at a strength of 1-80,000th; after these come thymic acid, persulphate of iron, chloride of zinc, etc. In order to study the antiseptic power of certain substances upon organisms in general, he prepared solutions of these substances at 1-100th, of which he poured 1 cc. into a series of small flasks containing severally 5 cc., 10 cc., and 20 cc. of neutral yeast, which gave him solutions of 1-600th, 1-1100th, and 1-2200th; to each of these he added ½ c. c. of washings of garden soil. He found that the most energetic antiseptics were sublimate of mercury and thymic acid. Sulphate and acetate of copper and bichromate of potash, although very active, allowed vegetations to grow; next to them in power were China cinnamon, persulphate of iron, carbolic acid, alum, and sulphate of quinine. Boric acid, hyposulphite of soda, salicylate of soda, arseniate of potash, bisulphide of soda, chloride of alumina, and chloride of lime are comparatively weak antiseptics.—*British Medical Journal*, June 18, 1887.

THE USE OF TALLOW TO SETTLE URINE EXAMINED FOR ALBUMEN.—MÉHU describes, in the *Annales des Maladies des Organes Génito-Urinaires*, for June, 1887, the following simple expedient:

In testing urine for albumen by hypobromite of sodium, the reaction is often obscured by a volume of nitrogen gas, which causes a film or mist, concealing the reaction obtained. Alcohol was formerly tried, but was inconvenient from the bulk required. A small mass, or pellet, of tallow, if placed in the test-tube before the agent producing the reaction is added, and the fluid shaken once or twice, will prevent the formation of the cloud of gas described. The gases contained in recently evacuated serous fluid may be dissipated by allowing a few drops of tallow from a burning candle to fall into it.

CITRATE OF CAFFEINE IN CARDIAC DISORDERS.—JACCOUD has used the following with benefit as a cardiac stimulant:

℞.—Caffeine	gr. 100.
Sodii benzoat.	ʒ 2.
Aquæ	ad. ℥ 8.

He prescribes from three to six grains in twenty-four hours; and in severe cases goes to twenty-five grains.

When the remedy is not well borne by the stomach, it may be given hypodermatically, and the following formulæ have been found useful by TANRET:

Sodii benzoat.	gr. 40.
Caffeine	gr. 35.
Aquæ destill. . . .	ad. ʒ 2¾.

Also,

Sodii salicylat.	gr. 45.
Caffeine	ʒ 1.
Aquæ destillat. . .	ad. ʒ 2¾.

Dosage to be varied with the indications and amount of caffeine required.—*L'Année Médicale*, 1887.

THREE HUNDRED CASES OF OÖPHORECTOMY FOR UTERINE FIBROMATA.—DR. G. ZVORYKIN has collected statistics of nearly 300 cases of spaying (*kastratsia*) for uterine fibroids. A large proportion of these are from English and American sources; seven, however, are contributed by Russian surgeons, six by Dr. Zvorykin's chief, Professor Lebedeff, and one by Dr. Salmanoff. Two of them are described as interstitial, three as multiple interstitial, one as interstitial cavernous, and one as subserous multiple interstitial. In all these seven cases, both ovaries, and in three of them more or less of the tubes, were removed. The hemorrhage from which all the patients had suffered ceased, and no bad symptoms occurred. Dr. Zvorykin compares spaying with myotomy, and believes the one to be as devoid of danger as the other. Spaying, he considers, is indicated in cavernous fibromata; in retro-cervical or interligamentous tumors, where myotomy would be attended with danger; in all interstitial fibromata, especially in small ones where menorrhagia is the chief symptom; in subserous fibromata of large size, if they give rise to menorrhagia; and in cases where the patient has become so anæmic and weak that the loss of blood necessarily attendant on the operation of myotomy would be likely to affect her condition seriously. Spaying he considers contraindicated in subserous fibroids with long pedicles which can easily be removed; in large interstitial fibroids causing symptoms of weight and bearing down, but unattended with menorrhagia; in fibro-cystic tumors; in young subjects in whom fertility may be restored after myotomy; and, lastly, in cases where the ovaries are enclosed in a mass of false membranes, and their removal is consequently attended with great difficulty.—*Lancet*, June 25, 1887.

HOT-AIR BATHS IN SYPHILIS.—DR. STEPANOFF, of Moscow, has contrived a plan of treating patients suffering from syphilis which has resisted mercurial and iodine treatment. He has had a box or bath constructed with an iron bottom lined with thick felt, in which the patient is placed. The bath is heated to about 170° to 190° F. by means of two Bunsen's lamps, each consisting of five burners. After the patient has been "baked" he is put to bed and covered with blankets, so as to prolong the sweating process commenced in the bath for an extra half-hour. After this he is allowed to dress and go into the ward to his dinner. By means of these baths the mercury is rapidly eliminated from the system and the patient's condition greatly improves, and after a course mercury is found to act quickly and energetically.—*Lancet*, June 25, 1887.

THE MEDICAL NEWS.

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SATURDAY, AUGUST 6, 1887.

PERNICIOUS ANÆMIA.

AT the last Kongress für innere Medicin, LICHTHEIM gave his experience concerning the dependence of pernicious anæmia upon the presence of the bothriocephalus latus in the intestinal canal. In the course of the last year he had observed two cases, of which the first presented itself before the publication of Reyher's interesting communication upon the same subject in the *Deutsches Archiv für klin. Medicin*, Bd. xxxix. In the first case, on account of the extreme weakness of the patient, no attempt was made to expel the parasite, or rather parasites, for post-mortem six bothriocephali were found in the intestinal canal. In the second case the parasite was expelled without perceptible effect upon the course of the disease. Lichtheim has seen nine other cases of pernicious anæmia in which no parasite of any kind was found in the digestive tract. He concludes, therefore, that the *rôle* of the bothriocephalus in the production of pernicious anæmia is a modest one, but admits that, clinically and anatomically, it is impossible to distinguish the cases in which the bothriocephalus is present from those in which it is absent.

The same observer also directs attention to the presence of degeneration of the posterior columns of the spinal cord in certain cases of pernicious anæmia. He has observed two such cases in which the diagnosis of tabes was confirmed by the necropsy, and a third in which, although the clinical evidence was not altogether complete, and there was no post-mortem examination, there was reason to suspect the presence of tabes. The affection of the cord is regarded as secondary to the anæmic condition, because the symptoms of the former either follow or are synchronous with those of the latter, and, in addition, the anatomical changes are those of an acute process. This is true also of the symptoms, which manifest themselves in the upper extremity much earlier than in ordinary tabes.

Lichtheim closes his communication with a consideration of the curative value of transfusion of salt solution in pernicious anæmia. He had become convinced that this measure was deleterious, both to the patient and the blood, and had abandoned it, but was induced to resume it by the favorable report of a case by Lépine, with the result of strengthening his former convictions. Of five cases in which he had lately employed it, two died a few days after the operation; two recovered from the operation, their blood condition remaining the same as before; the fifth was not unfavorably affected by the transfusion, soon after which the condition of the blood decidedly improved. The conclusion was that in anæmia of high grade and acute course, transfusion of normal saline solution is contraindicated; while in more chronic cases of lower grade, it may, perhaps, be of benefit.

In the discussion upon Lichtheim's report, JÜRGENSEN referred to a case of profound anæmia in which, the possibility of infection with anchylostomum duodenale not being entirely excluded, he exhibited the extract of male fern. A careful examination of the stools demonstrated the absence of anchylostomum, but showed enormous quantities of bacterium termo—the ordinary bacteria of putrefaction. Immediately after their expulsion improvement set in and proceeded to complete recovery.

LITTEN states that in fourteen cases he had examined the blood and feces without finding any of the parasites described by other observers of this disease. He believes that there are cases of pernicious anæmia for which, as yet, no sufficient cause has been discovered, while there are others, resembling the former in their finest details, which are fully explained by the presence of cancer, by changes in the gastric and intestinal mucosa, etc. This is certainly the most reasonable view of this obscure question, although there appear to be no good grounds for separating the pure cases of pernicious anæmia—*i. e.*, those of which the cause is unknown, from those of which the cause is known. The question is one of blood changes, and they are the same in both. A blood containing megalocytes, poikilocytes, and microcytes is the blood of pernicious anæmia. This condition may be secondary—*i. e.*, the cause is known; or primary—*i. e.*, the cause is, as yet, unknown.

A NEW INDICATION FOR AN ARTIFICIAL VESICO-VAGINAL FISTULA.

AN artificial opening from the vagina into the bladder was advised and practised many years ago,

by the late Sir James Y. Simpson, by Emmet, and others, for cystitis. The chief principle upon which this operation was founded was that of giving the diseased organ complete rest; the bladder thus freely opened was no longer tormented by the presence of urine, and hence the spasmodic and painful contractions excited by this secretion ceased, for it escaped through the artificial opening immediately after its entrance. This operation was done in cases of catarrhal cystitis, in which other means faithfully tried had failed to effect a cure.

PINARD and VARNIER, in the *Annales de Gynécologie et d'Obstétrique*, sustain the recent proposition of Hartmann, that the bladder should be opened through the vagina in cases of gangrenous cystitis. Such cystitis is most frequently the consequence of retroversion, or retroflexion, of the gravid uterus. It has also been observed to follow in some cases prolonged impaction of the child's head in the pelvic cavity. We might add to these causes an instance under our own observation, in which the accident resulted from a well-nigh mortal vesical hemorrhage which followed dilatation of the urethra with the crushing and removal of a very large calculus.

The indications for the operation, in case the cystitis occurs in consequence of a posterior displacement of the gravid uterus, are thus stated by Pinard and Varnier: When notwithstanding the disappearance of all cause of compression—either by restoration of the displaced organ, or the production of abortion—when, in spite of antiseptic washes, the urine remains opaque, fetid, ammoniacal, and mixed with broken-down membranes; if there is fever with an evening exacerbation, dryness of the tongue, and rapid emaciation; if hæmaturia occurs, and the catheter does not evacuate either urine or injected fluid, the operator should act at once. The only two plans presented are dilatation of the urethra, and opening the bladder through the vagina. But the former does not so readily permit the escape or the removal of the sloughing tissues, while, on the other hand, the latter gives freer access for exploration, and for the extraction of the foreign body, and the use of alterative injections; it also secures drainage and complete rest for the bladder.

The treatment thus advised for gangrenous cystitis we believe to be wise; and we wish that it had been suggested before we met with the only case we have seen of the disease, for though our patient recovered, it was only after a long illness, during a great part of which the result seemed doubtful.

CHOPART'S AMPUTATION.

IN our issue of July 16th, PROF. J. B. MURDOCH, of Pittsburg, published an interesting address upon Chopart's amputation, and relates certain personal experiences of an exceedingly favorable character. He enters a strong plea for the performance of this operation in suitable cases, in preference to the methods of Syme or Pirogoff. Whilst some surgeons are opposed to Chopart's operation in all cases, and teach that it ought never to be performed, a larger number of equally good authorities recommend the procedure in appropriate cases. Bryant is especially earnest in his advocacy of the operation, whilst Gross expresses the opinion that there can be no doubt "of the utility of this procedure in the class of cases under consideration." It is unnecessary to multiply the evidence for and against this operation. We coincide with Dr. Murdoch that the operation is a proper and useful one, and our personal experience bears us out in this statement.

The great disadvantage of the operation is in the tendency to retraction of the heel, a misfortune which many of us have witnessed, and it is the object of this short note to call attention to what we consider to be the mechanism of this retraction. Dr. Murdoch, in common with many others, lays the blame upon the unantagonized tendo-Achillis; and it is possible and probable that this is a factor in the production of the retraction, but if we consider the anatomy of the foot, with all its arches, we see that it is impossible for the face of the stump not to point downward when the weight of the body is thrown upon it.

The bones of the tarsus form an antero-posterior arch, with three points of support, the os calcis posteriorly, and first and fifth metatarsals anteriorly. The calcis does not occupy a horizontal position, but is directed upward and forward. The astragalus forms the keystone of the arch. The arches of the foot are maintained by ligaments and tendons. If now the anterior portion of the foot is removed, the calcis must yield when the weight of the body is brought to bear upon it, whether the tendo-Achillis is retracted or not. It is impossible for it to keep its normal position under these circumstances, and the head of the astragalus, and the anterior portion of the calcis are brought into contact with the ground. It has seemed to us that pressure upon the cicatrix would be best avoided by making a rather long and thick plantar flap, and a directly transverse dorsal incision above the line of the medio-tarsal articulation, so that when the astragalus and calcis are forced downward, the cicatrix might be above the line of pressure.

There is an advantage in securing the anterior tendons in the cicatrix, but whilst this gives a certain amount of flexion, it cannot prevent the sagging of the stump. If there is any indication that the tendo-Achillis is acting with undue force, it should undoubtedly be divided, or even resected, but we are convinced that the fault does not lie in

this condition nearly as much as in the one stated. It should always be our aim, however, to amputate in front of this joint when possible, as a better stump is secured if only a portion of the scaphoid and cuboid bones is retained.

LAPAROELYTROTOMY.

DR. ALEXANDER S. CLARKE, of Brooklyn, in a recently issued Nancy thesis, dedicated to Gaillard Thomas, earnestly advocates the operation with which the name of the latter is so identified that it might with justice be called by it, if personal nomenclature were not so objectionable.

In discussing the reasons for the operation not having met with general acceptance, he denies that the one given by Skene is correct, to wit, because the operation resembles very much more in its method a surgical than an obstetrical procedure, but claims that the true one is the painful effect which the memory of the first laparoelytrotomies by Ritgen and Baudelocque have left. This reason, however, does not seem to us valid, for surely the failures of these operators could have but little influence in contrast with the remarkable successes recorded by Thomas, and especially by Skene, nor would it weigh with great European operators, like Leopold and Sänger, for example, if they really thought it the best method of artificial delivery in pelvic contractions.

Dr. Clarke publishes a recent letter from Dr. Thomas, in which he states that he regards "this operation as much superior in all respects to the Cæsarean or the Porro operation." So far as the last operation is concerned the statement may be at once admitted, for "the Porro" has recently so greatly declined in professional favor that its final abandonment seems near and probable. But with the successes which the Sänger method of performing the Cæsarean operation has recorded, the other part of Dr. Thomas's statement will not be generally admitted as correct. Clarke, in comparing the two methods—that is, "the Thomas" and "the Sänger"—claims that the former has been done in only five cases under favorable circumstances, and then all the women were saved, a result superior to that obtained by the latter. But, of course, neither he nor other friends of laparoelytrotomy can regard so small a number of cases, and thus selected, as establishing the relative value of this method.

One of his arguments in favor of laparoelytrotomy is that it avoids the "inevitable dangers of placental hemorrhage and peritonitis," belonging to the Cæsarean operation even when performed by the Sänger method. The means for avoiding hemorrhage in the latter operation are well known, and probably most operators will prefer a carefully made and accurate incision, the wound completely closed so that prompt union results, to a lacerated wound of equal size, even if no important organs or tissues are injured, and such accidents have happened to the best operators—a wound which cannot be at once closed, and which requires several days for its healing.

We observe that the author fails, as most others who have written upon the subject have also done, to give the case of Gianflome, in Italy, the operation having been done in 1857, the child saved, but the mother lost.

THE Library of the Surgeon-General's Office is now being moved into the fire-proof building erected for its special use, on the southeast corner of the Smithsonian grounds, a full description of which appeared in THE MEDICAL NEWS of September 18, 1886. During the removal the books, of course, are not available for reference, but it is anticipated that they will be rearranged by the beginning of September, and will then be again accessible for use.

THE College of Physicians and Surgeons of New York announces that at the session of 1888–9, and thereafter, it will require preliminary examination of matriculants who do not hold diplomas or certificates from recognized colleges or schools of science. The examinations will be in writing, and will include English, Latin, arithmetic, algebra, and plane geometry.

DR. VICTOR C. VAUGHAN reports that he has found tyrotoxicon in the ice cream which poisoned 150 people at Amboy, Ohio, on July 4th. A few drops of the poison extracted from the ice cream killed a kitten in ten minutes. He has also found tyrotoxicon in ice cream which poisoned 50 persons at Geneva, N. Y.

IT is stated that the advertising or sale of patent medicines (secret or proprietary preparations) has been absolutely prohibited in Berlin, and sixty-one of them have been publicly denounced on account of disclosures made by chemical analysis.

REVIEWS.

THE HEALING OF ARTERIES AFTER LIGATURE IN MAN AND ANIMALS. By J. COLLINS WARREN, M.D., Assistant Professor of Surgery, Harvard University, Surgeon to the Mass. General Hospital, etc. 8vo. pp. 184, pl. xiv. New York: William Wood & Co., 1886.

INHERITED reputation is worth little, especially in this country, unless its happy possessor adorns it by addi-

tional achievements. Dr. Warren admirably fulfils this condition. His name is intimately associated with the famous medical department of Harvard College, and he has repeatedly shown that with his father's and grandfather's name he has inherited their ability for doing good work. The present book, in its matter, its beautiful mechanical work in printing, paper, and binding, and its fine plates, is the best work he has thus far done, and one that will add largely to his already enviable reputation. It is creditable to American surgery that such a work of laborious original research should be undertaken, and it will, we believe, long be the standard work in the English language on this all-important subject.

His first chapter, supplemented by a most extensive bibliography, covering no less than 235 titles, is an historical review of the subject and is an excellent foundation. Next he gives experiments on animals, then observations derived from man. Then follows an interesting and valuable investigation of the closure of the fœtal vessels, a happy study of a normal obliteration of the calibre of these vessels. The book closes with a short but clear and admirably written summary of his investigations.

He has done the subject an important service in drawing attention to the analogy between the processes of repair in ligated vessels and in broken bones, and he is to be felicitated on his naming the granulation tissue about the ends of the vessels at the seat of ligature the internal and external provisional callus, and in tracing the analogy between the osseous and the vascular changes that occur.

We have not space for a critical notice of the investigations he has made, but it is due to him to call attention to some few salient points. Thus, he has shown that the process of repair is not complete under from three to six months, and that the muscular cells of the middle coat are a prominent factor in the cicatrix. The analogy to bony repair is shown in the three stages which he enumerates as proved: (1) the immediate changes about the ligature; (2) the formation of the provisional callus; (3) the changes in the internal callus and the gradual absorption that follows.

A marked contrast is noted in the thrombi in septic and aseptic wounds, and it is such as to leave no doubt as to the influence of septic products upon the process of coagulation. He shows, also, that all the mechanical devices of different kinds of ligatures and of different modes of ligation are far less important than that immediate repair without suppuration be obtained, as is now possible with antiseptic surgery.

He denies the hitherto taught primary importance of proliferation of the cellular elements, and exalts the granulation tissue which forms the callus into the most important element. "The sole function of the ligature after it has closed the vessel is to keep the walls from expanding until they are held sufficiently firmly by the callus," and while the thrombus, which, he states, is always to be found, is becoming adherent to the walls; the two forming an efficient barrier to secondary hemorrhage.

This book should be not only read but studied, and its teachings incorporated into the lectures on surgery of all our medical schools—a compliment we can but rarely extend to any author.

SOCIETY PROCEEDINGS.

AMERICAN OTOLOGICAL SOCIETY.

Twentieth Annual Meeting, held July 19, 1887, at New London, Conn.

(Specially reported for THE MEDICAL NEWS.)

(Concluded from page 132)

AFTERNOON SESSION.

DR. CHARLES H. BURNETT, of Philadelphia, presented the report of

AN EXAMINATION OF FIFTEEN DEAF MUTES BY MEANS OF MALONEY'S OTOPHONE.

The cases examined were pupils in the Pennsylvania Institution for the Deaf and Dumb, Philadelphia, and were between the ages of twelve and twenty-one years of age. The cases were divided into three classes: 1, congenital cases; 2, those losing their hearing between the ages of one and five years; 3, cases of profound hardness of hearing but who can still hear a little and can talk, so-called semi-mutes.

The method of procedure was as follows: five vowels were written and pointed out at the time of their repetition three times in succession through the otophone by Mr. Maloney. The pupil was then told to indicate which vowel was spoken when Mr. Maloney made another repetition, care being taken to mix about in the tests. The words Philadelphia, Mississippi, Burlington, Missouri, boy, baby, papa, and mamma were also used as tests as well as the consonants.

Hearing was excited in every instance; but fourteen of the fifteen cases gave ample evidence of hearing by their successful indication with the pointer as the different tests were repeated in their ears. It was noted that the results were not so good with the acquired cases as in the so-called congenital cases of deafness. This may be due to the fact that the process productive of the acquired form is more violent, involving the internal ear more often than in congenital cases, which generally give evidence of being simply catarrhal in their origin and affect the middle ear but not the internal auditory organ. In the case of semi-mutes the results were especially satisfactory, as they heard nearly everything said to them and returned intelligent answers to the questions. In such cases both the remaining hearing and the articulation could in all probability be improved by the systematic employment of such an instrument as the otophone as a means of instruction, the best results being obtainable where the instruction is begun in early life.

A paper with the same title was forwarded by Dr. F. B. Loring, of Washington, and was read by title.

DR. WM. W. SEELY, of Cincinnati, asked whether the use of this instrument was recommended simply as a help to hearing or as a therapeutic measure?

DR. C. H. BURNETT replied that the instrument seems to be an immediate help, and is also a valuable therapeutic measure. In the case of an extremely deaf person who was unable to hear a loud voice when the words were spoken close to the ear, and who with an ordinary ear trumpet could hear slightly, with this instrument he could hear fairly well from the

first. After exercising for fifteen minutes, he was able to hear with closed eyes the unaided voice, the words being spoken a foot from the ear.

DR. SEXTON, of New York, presented a paper on

EXCISION OF THE OSSICLES OF THE DRUM OF THE EAR FOR CHRONIC PURULENT INFLAMMATION OF THE MIDDLE EAR TRACT.

Since bringing this subject to the attention of the Society, one year ago, he has continued the practice with satisfactory results, and presented some further observations based upon the records of nineteen operations. Of these nineteen cases thirteen were females and six were males, seven cases were between 5 and 12 years of age, eight were between 13 and 20 years of age, and four were between 23 and 40 years of age. The left ear was affected in eleven cases, the right in eight. In two cases both ears were the seat of suppurative inflammation, and in one there had been a mastoid abscess. In the majority of cases there had been a history of recurrent aural catarrh for a long time attended with pain in the ear. There were much deafness and distressing acoustic phenomena as autophonia and the like. The discharge was usually offensive. The general health of most of the patients was fair.

In all cases the drum-head was greatly impaired, the membrana vibrans being usually almost entirely gone; in most of the cases the membrana flaccida alone remained, perhaps with some portion of the membrana vibrans attached. Where any of the latter remained, it was liable to be found connected by bands with the inner wall of the tympanum. Sometimes a sinus of greater or less size opened through these diseased structures into the attic. The membrana flaccida, together with the membranous and ligamentous attachment of the ossicles, generally held the latter in place after the most extensive suppuration had long existed. Under these circumstances drainage was extremely likely to be interfered with. The manubrium and cicatricial structures depending from the auditory plate were frequently found adherent to the inner wall of the tympanum, while the attic and antrum were lined with much thickened mucous membrane.

Some portion of the middle ear tract was found to present more or less carious bony surface. In some instances the ossicles themselves were carious or ankylosed. In several of the cases the malleus handle was adherent to the inner wall of the drum. In some only a necrosed stump remained. In some the malleus and incus were adherent to each other. The incus was less liable to caries. The stapes cannot be so well examined as the other bones, since it is never removed. In some of the cases the operation was not resorted to until months or years after the ordinary methods of treatment had been resorted to without success.

Without going into all the details of the operation, the author said that experience had shown that it may be performed much more rapidly than was at first supposed. The first operations required an hour, the later ones not more than fifteen minutes. To the protracted operation he attributes some disagreeable symptoms, such as nausea, which had not been presented by the later cases.

The remaining fragments of the drum-head are everywhere detached from the tympanic ring with a slender trowel-shaped knife. The malleus is then freed from its attachments, including the tensor tympani muscle, by one or more sweeps of the knife. After all blood is removed, the long process of the incus is separated from the stapes if it be connected with that bone. The malleus handle is separated from the inner wall of the canal if it has been attached. The malleus handle is seized with stout forceps as high as possible and gradually detached and brought away. The removal of the incus is more difficult, since its long process is liable to be swept from view; with a little patience, however, the bone may be soon found, and its removal is then a simple matter. When lying in the attic the scraper may be of service in bringing it down. In most instances he no longer divides the chorda tympani. In some cases where the ossicles were very adherent, considerable force was necessary to detach them, and in one instance this was impossible.

After the operation the drum should be carefully dried with cotton and ten drops of a four per cent. solution of cocaine may be instilled. This is usually unnecessary. Usually very little or no reaction follows the operation. In females it is important to defer operation until a little time after the menstrual period.

In the nineteen cases both malleus and incus were removed in ten. In one the body of the incus alone was removed. In six cases the malleus only was excised.

When possible it is well to clear the drum of granulation tissue by treatment before the operation, since less hemorrhage will then be encountered. The duration of treatment after the operation was in 5 cases, one month; in 2, two months; in 2, three months; in 1, six months; and of the other 9 cases, 3 were unimproved, 1 failed to continue treatment, and 5 are yet under observation. Nine cases progressed steadily to a complete cure; 6 were much improved; 3 were unimproved, and 1 failed to continue treatment. Many of these were dispensary patients under bad physical conditions. A marked improvement in hearing occurred in nearly all cases. In the cases noted as cured, it was increased from 75 per cent. to 100 per cent., so far as testing with the voice was concerned.

This marked improvement in hearing was unexpected, and gave rise to the conjecture that we may recommend the operation for deafness alone in many cases where the drum is obstructed by the results of chronic purulent inflammation, although all discharge may have ceased.

It might be expected that the taste would be affected by injury to the chorda tympani nerve. In a few this was the case for a short time; recovery, however, always took place. Reproduction of the drum-head never took place. Among the results of the operation, may be mentioned the prevention of recurrent accumulations of purulent matter in the attic and antrum. The general health was nearly always improved. In two phthisical cases the cough was lessened in one and ceased in the other, whilst both gained much in weight. In children the effect on health was most marked.

The operation is performed with the patient upon the back and under ether narcosis. The electric light is almost essential. Magnifying lenses introduced into the speculum are of service. The after-treatment consists in keeping down granulation tissue and in aiding

in the transformation of the mucous lining into a dermoid condition. A meddlesome plan of treatment is undesirable. Where a large secreting tract exists a cure is sometimes almost impracticable. Alcohol has not been found useful in treating granulation tissue. Salicylic acid and boric acid have done good in a few cases. The peroxide of hydrogen has its use in certain cases. The persistence of discharge after operation may be expected in catarrhal and run-down subjects, especially where caries of the bone exists.

The specimens removed in these nineteen cases were presented.

DR. BURNETT stated that he had seen seven cases that had been operated on by Dr. Sexton. One case was of fifteen months' standing. There was no evidence of reproduction of the membrane. In the longer cases there was no discharge. In the cases more recently operated on there was still some discharge. In five of the seven cases, according to the statements of the patients, the hearing had been greatly improved.

EVENING SESSION.

DR. THEOBALD reported a case of

SYPHILITIC DISEASE OF THE LABYRINTH

exhibiting remarkable variations in the degree of deafness.

The patient was a man of about thirty-four years of age, the subject of inherited syphilis. In one ear the deafness was nearly complete, and in this ear there was little variation. In the other ear, frequent and sudden relapses occurred, after the hearing on several occasions had been brought up almost to the normal standard. Within twenty-four hours the hearing would fall from the ability to distinguish words in a whisper at twenty inches to a degree of deafness which would require the same words to be spoken in a loud voice. Iodide of potassium was given with but little effect, but decided benefit resulted from the administration of bichloride of mercury in combination with muriate of ammonia.

EXECUTIVE SESSION.

The following were elected

NEW MEMBERS,

Drs. J. C. Lundy, of Detroit; Wm. H. Hotchkiss, of New Haven; S. D. Risley, of Philadelphia; and David De Beck, of Cincinnati.

OFFICERS FOR ENSUING YEAR.

President.—Dr. J. S. Prout, of Brooklyn.

Vice-President.—Dr. George C. Harlan, of Philadelphia.

Secretary and Treasurer.—Dr. J. J. B. Vermyne, of New Bedford, Mass.

Representative on Executive Committee of Congress of American Physicians and Surgeons.—Dr. C. R. Agnew, of New York.

Alternate.—Dr. Wm. H. Carmalt, of New Haven.

The next meeting of the Society will be held at the Pequot House, New London, Conn., Tuesday, July 19, 1888.

Adjourned.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-third Annual Meeting, held at New London, Conn., July 20 and 21, 1887.

(Specially reported for THE MEDICAL NEWS.)

(Continued from page 136.)

THURSDAY, JULY 21ST.—SECOND DAY.

GLIOMA AND PSEUDO-GLIOMA.

DR. H. D. NOYES, of New York, wished to record the case of a girl who, when fifteen months old, had an eye enucleated for glioma of the retina, and who was living in good health, at the age of sixteen years. There had been no recurrence, and an artificial eye was worn constantly with comfort. The enucleated eye had been examined microscopically by Dr. Delafield and pronounced gliomatous. Another case had been seen eight years after enucleation of an eye for glioma, still in perfect health.

A boy aged five years fell, wounding his face and the lower edge of the orbit. Ten days later his mother noticed he could not see with that eye. After six months, light-perception had been lost; scleral vessels injected, iris slightly greenish, tension diminished, vitreous chamber partly occupied by a grayish highly vascular growth. Dr. H. Knapp joined in a diagnosis of pseudo-glioma. The eye was enucleated. Sections of it were exhibited showing an inflammatory mass and detached retina. The trouble seemed to have been caused by injury to the floor of the orbit, adjoining which the orbital fascia was hypertrophied and cicatricial. Before the enucleation no evidence of orbital injury was detected.

DR. S. THEOBALD had seen a boy who had an eye enucleated for glioma, living nine years later with no sign of recurrence. In this case there had been no microscopical examination, but the macroscopic appearances satisfied him that it was glioma.

DR. H. KNAPP thought it doubtful if permanent cure is possible in these cases; he had recently heard of the death of a patient ten or twelve years after such an enucleation. Another case, seen last summer, remained well, six years after the enucleation.

DR. W. H. CARMALT, of New Haven, agreed with the last speaker as to the tendency of the sarcomata to recur ultimately, and become general even after complete removal. He remembered the case of a babe six months old, blind in both eyes, where the diagnosis of glioma was made by several experts; and the eyes enucleated. But the microscopical examination revealed only a congenital detachment of both retinas.

DR. J. S. PROUT, of Brooklyn, had seen a case of pseudo-glioma go on to rupture of the eyeball posteriorly and kill the child. Here was additional reason for the removal of such eyes.

DR. B. A. RANDALL had seen a case in which Dr. McClure had enucleated for glioma seventeen years before. He did not know of any microscopical diagnosis of the case. The patient was still well, and there had been no asymmetry in the development of the orbit.

DR. E. GRUENING had seen a girl aged five years operated on in 1875 for true glioma; and a girl aged one year operated on in 1879 for the same trouble.

There had been no involvement of the optic nerve in either case. Both were still healthy.

DR. B. E. FRYER, of Kansas City, had, in two cases of intraocular tumor with hazy vitreous, had great assistance in making the diagnosis, from the electric light.

DR. NOYES said he was sometimes able to make a positive diagnosis of glioma, in other cases he could not give an opinion without a microscopic examination. He used highly condensed light from a four-inch condensing mirror, and examined doubtful surfaces under a strong magnifier.

DR. KNAPP had used condensed sunlight.

DR. W. S. DENNETT, of New York, had used all kinds of light. The main thing was to get enough of it. He thought the electric light the most constantly available and most manageable.

DR. H. D. NOYES reported a case of

REMOVAL OF A PROLAPSED LACHRYMAL GLAND.

A girl aged twenty came with the history of a swelling under the upper lid that had been growing for nine years. It was brought to view by raising the lid, and extended within six mm. of the cornea. It was quite movable, very elastic, and free from pain. A much smaller mass presented in a similar position on raising the lid of the other eye. The larger mass was removed, and proved to be the normal lachrymal gland, which seemed to have taken this abnormal position simply by reason of an undue laxity of its fibrous capsule. No unpleasant effects followed the removal.

A SUGGESTION FOR THE RELIEF OF ENTROPION OF THE LOWER LID.

DR. H. D. NOYES had operated four years ago for entropion of the lower lid by dissecting up a narrow strip of skin from below the base of the lid, and after removing a little conjunctiva from the lid toward the outer canthus, had attached the end of the strip at this point. Last winter the patient returned with the lid in good position, but with the little bridge, or bridle, of skin still fast to it. This little band was removed, leaving a perfect cure of the entropion.

DR. JOHN GREEN, of St. Louis, had formerly practised the operation of making an incision through the skin near the base of the lid, and parallel to the lid border. The skin of the lid was then dissected up, and drawn down and attached lower on the cheek. This gave a good immediate result, but it was not permanent. Latterly he treated entropion of the lower as he did that of the upper lid, adding to his former operation an incision parallel to the lid margin, upon its inner surface. This had rendered the operation more effective, and its good results more permanent.

DR. W. W. SEELY, of Cincinnati, asked if this was not simply the Hotz operation practised on the lower lid.

DR. GREEN said that it differs from the operation, known in this country by the name of Dr. Hotz, in not splitting the lid. The second incision is fairly on the inner surface some distance back from the orifices of the Meibomian glands; and it sacrifices no skin. It was the operation commonly practised by the ancients on the upper lid; but they, on the lower lid, merely removed a large piece of skin.

DR. E. GRUENING had used the Hotz method, putting the sutures through the whole thickness of the conjunctival sac except the skin. He removed nothing, and had found entropion of the lower lid as easy to remedy as entropion of the upper lid.

DR. NOYES believed that there were cases where this expedient of a "buckle" of skin to hold the lid in position would be found useful.

A PHENOMENAL PULSATION IN THE INTERIOR OF THE EYE.

DR. W. F. MITTENDORF, of New York, had observed this in the eye of a patient with hyperopic astigmatism and asthenopia. The fundus and the tension of the eye were normal. There was no spontaneous pulsation of the vessels. On the disk the perivascular sheaths were particularly well marked. Above the disk there was, stretched between two vessels, a bag or band of gray which pulsated synchronously with the action of the heart, although not the slightest movement could be seen in the vessels. Higher, and to the nasal side, there was a gray shred attached to an artery that pulsated when sufficient pressure was made on the globe to cause ordinary arterial pulsation. The conclusion of Dr. E. G. Loring and himself was, that the former appearance was a connective-tissue band, and not a bag connecting two perivascular sheaths.

DR. L. HOWE wished to call attention to the pulsation tracings which could be obtained from the normal eye, by a form of plethysmograph adapted to it.

DR. E. JACKSON had seen a tag of connective tissue attached to a perivascular sheath, hanging out over a rather deep physiological cup on the disk, which pulsated when no pulsation was apparent in the vessels. Both eyes presented this phenomenon.

INCREASE OF BLINDNESS IN THE UNITED STATES.

DR. L. HOWE, of Buffalo, called attention to the fact, that while the population during the ten years from 1870 to 1880, increased 30 per cent., blindness during the same time increased over 140 per cent. By means of a diagram, the percentage of increase in each State separately was shown. The statistics also show that blindness increased in an almost constant ratio from north to south, and that it decreased in the same way from east to west. This was also shown by colored maps. The cost of sustaining this army of over fifty thousand blind was estimated, on the lowest basis of cost and of wages which would have been earned, at over sixteen million dollars in 1880, or twenty-five million dollars in 1887. As for the causes, contagion was found to exercise the most important influence. This was found by a special examination made for the pupose of 128 pupils at the Batavia Asylum for the Blind; by the statistics collected by Magnus, and by the records of over forty-eight thousand cases treated at the Manhattan Eye and Ear Hospital. Immigration was also considered as an important factor in view of the large number of cases of contagious diseases of the eyes introduced every year into the country, and the laxity or absence of quarantine regulations regarding them.

DR. H. D. NOYES noticed that the increase of blindness was especially marked in States with great mineral resources, where large numbers of the population would be liable to mine and mill accidents, etc., and where it would be difficult or impossible to obtain skilled atten-

dance for such injuries. Some means should be devised for the relief of such cases.

DR. G. C. HARLAN, of Philadelphia, called attention to the uniformity in the proportion of blindness due to conjunctival disease, as shown by different sets of statistics.

DR. S. M. BURNETT thought that in connection with locality the influence of race should be considered. Negroes form a large proportion of the population of the Southern States, and they are almost entirely exempt from trachoma, although especially liable to scrofulous affections of the cornea.

DR. W. F. MITTENDORF was not surprised at the increase of blindness; he thought it due largely to the crowding of young persons into public institutions.

DR. P. A. CALLAN, of New York, asked: What can be done to check it? Should not societies be organized in every large city to instruct the public in the care of the eyes?

DR. M. STANDISH, of Boston, in a dispensary service where a large proportion of the patients were Irish, and where there were many cases of trachoma, had noticed that most of the flagrant cases of this affection appeared among those who had lately arrived in this country, as though it had been contracted during the passage in the crowded steerage of the emigrant ships.

DR. HOWE offered the following, which was adopted:

Whereas, The Census reports indicate there has been an increase in the number of blind in the United States more than four times as great as that of the total population; and

Whereas, An inquiry as to the causes of this shows that it is largely due to contagious diseases of the eye, therefore

Resolved, That a committee of three be appointed to examine further as to this apparent increase, and recommend means for its prevention.

Resolved, That the President of the United States and the Secretary of State be respectfully requested to furnish this committee with whatever letters or other recommendations may be necessary to further their investigation in this country or elsewhere.

Resolved, That officials in charge of residential schools and similar institutions be also requested to assist the committee to any extent in their power.

DR. L. HOWE, of Buffalo, was appointed chairman of the committee, and the President was permitted to announce the other members at his leisure.

THE EYE OF THE ADULT IMBECILE.

DR. C. A. OLIVER, of Philadelphia, had examined twenty young adult male imbeciles. Nineteen observations were obtained, with the following conclusions:

First. The eye of the male adult imbecile is an organ which is capable of proper functional activity.

Second. By reason of early mental incapacity, the ordinary appearances seen in the used eyes of the mentally healthy are lessened in due proportion to the amount of work given to the organ.

Third. The eye of the imbecile being practically an unused organ for close and careful near work, the distention of the globe and elongation of its visual axis with consequent increase in refraction, is almost entirely avoided, this being in direct ratio to use.

Fourth. The want of these physical changes may be considered as significant of a type of the unused healthy human eye.

Fifth. The healthy eye of the imbecile serves to teach us that the various conditions seen in the used eye of the mentally healthy must be considered as pathological changes, the representatives not only of general want of tone, but of constant and frequent abuse of a delicate organ.

DR. E. JACKSON said that the author had spoken of being unable to test the accommodation of imbeciles. In the shadow-test with the plane mirror, we have a reliable and convenient method of measuring the accommodation.

CASES ILLUSTRATING CHANGES OF FORM IN THE EYEBALLS.

DR. S. D. RISLEY, of Philadelphia, reported nine additional cases of eyes with hypermetropic refraction passing, while under observation, into myopic refraction, through the turnstile of astigmatism; the first and last states of refraction being determined with complete paralysis of the accommodation. The importance of the existing astigmatism was insisted upon as a cause of the eyeball distention; and, therefore, the careful correction of the astigmatism was regarded as of great importance in the treatment of these cases.

All of these cases yet presented to the Society—twenty-two in number—were characterized by asthenopia, aggravated by use of the eyes, retino-choroidal disturbance, diminished resistance to normal intraocular tension, and slow distention of the sclera. They were all partially or completely relieved for a time by the correcting glasses, and other treatment employed, and in some of them the trouble returned only when the glasses were neglected. He believed that in a much larger group of cases this process was going on, and would have continued to progress if it had not been checked permanently by the use of the correcting glasses. One of the cases, that of a lady about fifty, illustrated the fact that these changes were not confined to youth.

DR. W. W. SEELY thought that lack of the proper balance between opposing extraocular muscles, is a most frequent factor in such changes of refraction.

DR. RISLEY had for many years made it a routine practice to test that balance; in only three of the cases reported was it incorrect. These exhibited insufficiency of the interni. Two were relieved by tenotomy of the externi, and the third by prisms. He felt confident that astigmatism was the important factor.

DR. H. KNAPP asked the opinion of the members as to the power of correcting astigmatism by voluntary unequal contraction of different parts of the ciliary muscle.

DR. SEELY had a patient who could correct 1.5 D of astigmatism after leaving off his glasses for a little time, but the power of doing so was not strictly under control of the will.

DR. S. M. BURNETT thought that, undoubtedly, there were such cases, and that a practical point was that the astigmatism might be different for near, from what it was for distant vision.

DR. B. A. RANDALL had seen several cases of marked increase in the degree of astigmatism under the use of a mydriatic. In one case this amounted to 3 D.

DR. W. F. NORRIS said that almost every case of hyperopic astigmatism can make the horizontal, then the vertical lines alternately clearer, especially if there be any retinal irritation.

DR. W. H. CARMALT thought that cases in which astigmatism was corrected or aggravated by contraction of the ciliary muscle were so common, that the point should be regarded as settled.

DR. THEOBALD was able to vary, within certain limits, the strength of the cylinder correcting his own compound myopic astigmatism, without impairing his acuteness of vision.

DR. RISLEY thought that only in mydriatic paralysis did we get the true refraction of young persons. But he had never satisfied himself of the existence of power to change the astigmatism by voluntary unequal contraction of the ciliary muscle. Astigmatism might be partly corrected by changing the shape of the cornea through pressure, particularly by the lids.

DR. KNAPP thought astigmatism could be partly corrected by pressure from without, but not of the lids. In most cases, the principal meridians were such that pressure of the lids would aggravate the astigmatism.

THE PATHOGENESIS OF PTERYGIUM.

DR. S. THEOBALD, of Baltimore, urged that any theory that attempts to explain the causation of pterygium, must account for the fact that it always occurs over the insertion of one of the recti muscles into the sclera, and usually over the insertion of the internal rectus. Existing theories do not do this. The one ascribing pterygium to injury and ulceration of the cornea, at the margin of the conjunctiva, ignores the fact that the process often starts in the conjunctiva, some distance back from the cornea; while those ascribing it to conjunctival irritation fail to account for its especial frequency on the nasal side of the cornea. If, however, we suppose that pterygium be due, at least in part, to an influence which use of the recti muscles exerts on the blood supply of the conjunctiva over their attachments, these points are readily explained. Persons presenting this affection, often give a history of recurrent hyperæmia of the part after using the eyes. Then the internal recti are in closer relation with the conjunctiva covering their insertions than any of the other muscles; and are most frequently and severely taxed. The cases reported by Dr. J. A. Lippincott at this meeting, bear out this view.

DR. D. B. ST. J. ROOSA said that in a large proportion of cases of pterygium, a history is given of traumatism as the commencement of the process. He thought persistent hyperæmia over the attachment of the internal recti quite common, but that it would not lead to such extensive proliferation of tissue.

DR. THEOBALD held that some cases are doubtless due to traumatism, but these were only occasional, and often not situated in the usual location. But ninety per cent. of pterygia are situated at the nasal side of the cornea, and this, traumatism, or corneal ulcers will not explain.

DR. J. A. LIPPINCOTT thought that persistent hyperæmia commonly produces hyperplasia of the part. Dr. Roosa's objection to the theory seemed not well founded.

RECURRENT RETINAL HEMORRHAGES, WITH DEVELOPMENT OF BLOODVESSELS IN THE VITREOUS.

DR. S. THEOBALD had previously seen the patient for refractive troubles. In April, 1886, there had been conjunctival injection, pain, and dimness of vision. The ophthalmoscope showed small hemorrhages above the disk. These increased in number for a few days, and the diagnosis of thrombosis of the upper retinal vein was made. In July, vision $\frac{20}{XL}$; in August $\frac{20}{XX}$ September 20th she had a fresh hemorrhage. In October there was a dark mass like a globule of blood below the disk. In January, 1887, there were fresh hemorrhages. February 22d, vision again $\frac{20}{XX}$. March 26th, a floating opacity was discovered in front of the disk, which was found to consist of small bloodvessels held together by semi-opaque connective tissue. By June 3d this had become smaller, and vision = most of $\frac{20}{XX}$.

DR. W. H. CARMALT said that in February, 1877, a man consulted him for sudden blindness of the left eye, the vitreous being filled with blood. A month later there remained traces of coagula in the vitreous. In August the vision of the right eye was lost in the same way, and hemorrhage was found in the vitreous, with choroidal changes. In January, 1878, the left eye was again affected. When the hemorage cleared up, there were floating bodies in the vitreous, and a meshwork of bloodvessels extending far forward from the fundus. The nerve was pale, the veins rather large, and arteries small, and to the nasal side an artery ruptured, and an ecchymosis adjoining. The general condition of this eye and the new vessels in the vitreous continue the same. Every few months he has a fresh attack of hemorrhage, but lately these attacks have been confined to the other eye. The vessels seem to come from a point outside the nerve.

DR. B. E. FRYER had seen one case of recurrent retinal hemorrhage which he thought was due to scurvy.

DR. O. F. WADSWORTH had seen, ten years ago, in a man then over thirty, extensive hemorrhage into the vitreous of one eye, which was clearing up, when hemorrhage occurred into the retina of the other eye. The fundus of this second eye seemed otherwise normal, except spots of perivasculitis near the equator, and on one vessel a fusiform white enlargement. Again, the first eye became almost blind from hemorrhage. After this, when the vitreous cleared, the retina could be made out, but with transparent membranes in front of it, carrying vessels in the vitreous, some of which could be traced to their connections with the retinal vessels. Two years ago there had been no recurrence of hemorrhage for over a year. The other eye early returned to the normal condition.

In another man, aged twenty-three, there had been sudden blindness from great hemorrhage into the vitreous. This afterward cleared up in a large measure, and he had a recurrence, after no special exertion, just as he was getting into bed. The sight was afterward lost.

DR. H. KNAPP had treated these cases as he did lesions of the choroid. But the main point was to avoid

fatigue of the eyes, and to put them to rest early in the evening. A waitress, well treated by the family with whom she lived, almost always had such hemorrhages when the family had given an evening party, and when she would be kept up late and much fatigued.

EMBOLISM OF THE CENTRAL RETINAL ARTERY.

DR. G. C. HARLAN, of Philadelphia, reported the following case: The patient was a clerk, fifty-two years of age, in good general health. While reading with perfect comfort, a shadow suddenly appeared before his left eye; and, on closing the other and looking up, he could just distinguish large objects about the room, through a "brownish mist," and in a few minutes sight was entirely gone. An ophthalmoscopic examination, made the next morning, showed an extensive œdema of the retina, giving the whole fundus a grayish tinge; disk pale, and its margins blurred; arteries very pale, though not much narrowed, and some of the smaller branches lost in the retinal œdema; large veins contracted in places, particularly on and near the disk, but generally of full calibre; phenomenon of visible, slow, continuous circulation of the blood in bead-like sections, well marked in superior temporal artery and vein; macula occupied by bright red patch, oval in form, with long diameter horizontal, and several of the minute terminal vessels in the neighborhood unchanged, and apparently isolated; two small dots of retinal hemorrhage at outer margin of the disk.

The œdema increased decidedly for the first few days, and then gradually subsided. There was still a little remaining on the nineteenth day, after which the patient was not seen for three weeks, when the color of the fundus was normal. The visible circulation lasted only about a day and a half, disappearing first in the artery. The veins refilled at their narrowed portions, and retained nearly their normal calibre, while the arteries became paler and narrower, until only the two main trunks could be seen, and these showed white lines along the margins from perivasculitis. The spot at the macula gradually disappeared. The disk regained the distinctness of its outlines, and remained dead white. (Colored plates were shown, illustrating the first and the final appearance of the fundus.) The pathology of the case was very obscure; the heart and kidneys were normal, and there was no symptom of degeneration of the arteries. A caries of the middle turbinated bone on the same side, from long standing nasal catarrh, was not thought more likely to act as a cause than would be a similar local disease in any other part of the body. The only possible causes seemed to be that some product of the nasal disease might have found its way into the general circulation, and lodged in the retinal artery; that an embolus might have been formed of a fragment washed from a parietal thrombus in some distant vessel; or that the obstruction might have resulted from disease in the retinal artery itself.

SIMPLE GLAUCOMA.

DR. D. COGGIN, of Salem, Mass., reported a case in which the left eye, after gradually failing for four years, had become entirely blind, with the characteristic excavation of the disk. The other eye, then, with correcting glass, had full vision. Subsequently its tension increased, and vision fell to $\frac{1}{4}$. The pupil remained normal, eserine had no influence in arresting the disease. Iridectomy was done, and there had been no further advance in the process in the eighteen months that had since elapsed. Does not the performance of iridectomy offer these cases more hope than any other measures? Other cases were reported, which, without operation, went on to complete blindness.

THE DANGER OF USING OLD HAMMERS.

DR. G. C. HARLAN had his attention called to this by a patient, whose eye had been penetrated by a scale from a hammer he was using. After long use the metal in a hammer becomes crystallized and very brittle, and a layer forms at the surface that is extremely liable to be chipped off. A hammer showing such a layer was exhibited.

(*To be concluded.*)

AMERICAN NEUROLOGICAL ASSOCIATION.

Thirteenth Annual Meeting, held at Long Branch, N. J, July 21, 22, and 23, 1887.

(Specially reported for THE MEDICAL NEWS.)

(Continued from page 138.)

THURSDAY, JULY 21ST.—MORNING SESSION.

DR. J. H. LLOYD, of Philadelphia, presented a

NOTE ON A CASE OF INSANITY OF DOUBT.

These cases are characterized by a special form of delusion which differs radically from the delusions either of grandeur or persecution. They are changeable, negative, vulnerable, and confessed with timidity and mortification. They are somewhat allied to melancholic conditions, but are not characterized so much by depression of spirits as by confusion and perplexity of mind. The patient is apt to recognize the morbid character of the mental state, and will willingly take measures to counteract and cure it.

He related the case of a lady brought from a distant city to Philadelphia, to be placed in a hospital for the insane. During the preceding year she had shown change of character and habits, and had developed some well-marked symptoms of the *folie du doute*. She had been known to get in and out of bed at least twenty times on retiring at night, because of some morbid train of associated ideas which made her feel that she had not performed the act aright, and that unless it was done in a certain precise manner it would in some way be the cause of disaster to her, producing disease or her death before morning. So again, recently, she obliged her husband to remain in her room with her, after arising, until she had put on and taken off again, innumerable times, one of her skirts, apparently from a morbid impulse of the same kind. In order to be rid of those morbid promptings, she is impelled to resort to little tricks, repetitions, and foolish actions, which explain the erratic conduct of which she is guilty. Thus, when dressing, she obliges her husband to hold a pin for her, which she must seize at just the right moment, otherwise the toilet must be made again. She has sometimes insisted upon this long-suffering husband rising in the night, going down stairs, lighting a certain gasburner and extinguishing it again in just a certain way, because this was necessary to absolve her in some

manner from some of her morbid doubts and associations; and she has not been content until her husband has humored her.

She is a woman, about thirty years of age; rather under weight for her build; of not very good color and complexion; of sound muscular system, but not well developed, and suggesting rather physical than mental impairment, and that not serious. She said that she knew perfectly that her notions were morbid, and hoped to be able to conquer them with improvement of her health by horseback and outdoor exercise. But she opposed being placed in an asylum, and threatened, if she were, suicide. Her husband was advised to take her home, but, if with time the case grew worse, to place her in an asylum.

The several cases which he had seen, have all probably been of the neurotic or constitutional type.

DR. MILLS had seen this patient and concurred in Dr. Lloyd's opinion. Extreme care should be used in committing these cases to an asylum, for if they be brought into court but few juries would adjudge them insane, although he did not doubt their insanity.

DR. GRAY remarked that he had no doubt that these cases are insane, and should not hesitate to put them under restraint, but would not do so unless he well knew the antecedents. In his experience he had found them exceedingly dangerous, as a number of them will go a long time without manifesting dangerous symptoms, when some day they will commit some terrible deed. He cited a case in which a woman had been in an apathetic condition for some time, who had, by actual count, washed her hands four hundred times in one day, and yet for all medico-legal purposes would have been considered sane. She had become debilitated owing to neuralgia and some uterine difficulty, but her mind seemed to recover somewhat under careful medical treatment. He, however, decided to send her to Bloomingdale, and so informed her, stating the result he hoped to attain in her case; but the day before she was to go, she, unfortunately, quarrelled with her mother on some trivial matter and set fire to her own clothing, having secretly procured and hidden matches about her person. He deemed them especially dangerous when left with children.

DR. LANDON CARTER GRAY read a paper on

CHOREA,

which, he said, has been considered as a self-limited disease of an average of ten weeks' duration, but he considered it more serious than has been allowed. Of 134 cases noted in his records, 17 have had one relapse, 4 have had two, 3 have had three, 1 has had five. In 23 the disease was distinctly chronic. He then gave the statistics of the remainder, some suffering from hysteria, and some from convulsions, some also from a neurosis; two were fatal. The mortality in pregnant women he placed at twenty-five per cent. He considered it to be greatly increased by mental impression ending in chronicity or cure. One peculiar case was quoted in which red, painful spots appeared at the ankle as premonitory symptoms, the following day choreic symptoms were shown, and the painful spot had disappeared. After a careful retrospection of his case, the writer had come to the conclusion that rest in bed was the best remedial agent. Eight years ago he had concluded that arsenical treatment was the best method to be pursued, but he had since discovered his mistake, and that arsenic was but temporary in its effect. He also used large doses of dialyzed iron, thirty minims to two drachms well diluted; galvanization of the spinal cord also being of benefit.

DR. STARR inquired as to the probability of adults becoming insane after developing chorea, as in some cases he had noticed a tendency to melancholia.

DR. LLOYD remarked that he had noticed in a pregnant woman a tendency to mental impairment.

DR. DERCUM asked if he had had any experience with cimicifuga.

DR. HAMMOND said that in his practice he used arsenic almost exclusively, and in anæmic cases combined it with rest and tonic treatment.

DR. EDES mentioned cases which had passed into insanity, but had afterward recovered.

DR. GRAY considered choreic insanity of very rare occurrence; as to whether the choreic patient was more prone to insanity that he could not say. In regard to cimicifuga, he considered it as a tonic in this disease, but he had not had much experience with it.

DR. M. A. STARR, of New York, made some remarks

ON PARAMYOCLONUS MULTIPLEX, WITH REPORT OF A CASE.

He drew attention to the method of staining advocated by Weigert, the specimens being soaked in the solution before they are cut, and he exhibited specimens thus prepared.

AFTERNOON SESSION.

DR. DERCUM, of Philadelphia, reported

TWO CASES OF HEMICHOREA ASSOCIATED WITH BRIGHT'S DISEASE.

He called attention to the fact that the movements first commenced in the arm, next the face, and finally involved the whole body. This condition remained for two weeks, the motion being so violent as to interfere with sleep. A carbuncle appeared on the neck, and death finally resulted. At the post-mortem the vessels were found to be thickened and somewhat pale. The second case was that of a carpenter, sixty years of age, who had suffered from vertigo for several years. Suddenly he lost the use of his right leg. This lasted for two weeks, but he was perfectly conscious. He afterward fell a few feet from a scaffold, but escaped without injury. Unfavorable symptoms followed; albumen was found in the urine, and he passed water twice during the night; casts also being found in the urine. He asked whether there was any association of hemichorea with Bright's disease. In neither of these cases was there any history of hemiplegia.

DR. EDES thought that these symptoms were not alone confined to Bright's disease, but that the general system was involved; that there are cases of hemiplegia which come and go very rapidly. He thought in Dr. Dercum's cases there was some disturbance in the circulation, but not enough to be detected after death.

DR. MILLS was inclined to agree with Dr. Edes, and thought that the disease produces unilateral depression of the general system. He had seen not a few cases

in which hemiplegia was developed in Bright's disease. He considered this to spring from a condition purely local, developed in the cerebrum from the uræmic poison; and at the post-mortem, unless under the most careful examination of the brain, he would find nothing that he could call a gross lesion. In general terms, we had an interference of circulation. Why it should be on the right side in one, and on the left in another, he did not know, and he considered it purely accidental. He thought chorea might be produced in this way.

DR. DERCUM remarked that, although he had made careful microscopical examination, he had found nothing but general œdema, and in one case slight sclerosis of the vessels, but not more marked on one side than the other.

DR. E. C. SPITZKA, of New York, read a paper on

ACUTE OR GRAVE DELIRIUM.

He considered that this condition might arise from various causes, commencing with insomnia, inability to collect the thoughts, and a feeling of impending misfortune; some may feel hilarious, some have illusions of hearing or touch; others, again, are passive. Both the temperature and pulse increasing, the symptoms denote extreme exhaustion; later on, before death, but just previous to this, the patient may become sane. He held that this condition was due to disturbed circulation, produced by morbid changes in the brain and perverting its function.

DR. GRAY remarked that he had had only one fatal case of this kind. One case had now been living three years, and was in an asylum; another lived for six months. One case had a history of syphilis. The fatal cases that he had seen had been so violent that they had to be restrained.

DR. MILLS stated that in three cases of so-called hysterical insanity which had been under his observation, two died and one recovered. He believed that two of them were cases of grave delirium.

DR. HENRY HUN, of Albany, reported a case of

GLIOMATOUS HYPERTROPHY OF THE PONS,

which will appear in full in an early issue of THE MEDICAL NEWS.

DR. M. A. STARR read a paper on

PARAMYOCLONUS MULTIPLEX,

based on the case of a grocer who previously enjoyed good health, but had recently strained himself in lifting a box. The pain commenced below the right shoulder and was so severe that he immediately consulted a physician, and while in his office was seized with a convulsion and screamed with pain. This was followed by spasms of the muscles of the trunk, with ten or twelve attacks in twenty-four hours, groups of muscles of the extremities gradually becoming affected, and spasm of the diaphragm was also observed. These spasms he could not control and any exposure to shock would produce them; they were more liable to occur under mental excitement, and pressure on the right shoulder at the seat of pain would produce them. The spasms of the muscles were very violent, but did not move the joints. Tapping of the skin would produce a spasm. He considered this affection a functional neurosis. This, he believed, was the tenth reported case. The disease was a spasmodic affection of the muscular system occurring bilaterally, and coming on in a series of violent clonic spasms occurring at intervals after violent physical or mental strain. Galvanism, arsenic, chloral, etc., had been found beneficial in the treatment.

DR. SPITZKA mentioned a case, but the patient was not quite equally affected on both sides of the body; the movements were 145 to the minute.

DR. DANA mentioned a case he had seen in which the movements of the muscles commenced at 5 and increased to 60 in the minute, but it did not resemble Dr. Starr's description in all points.

DR. MILLS could not see the necessity of dividing this from muscular tremor and making it a separate group, and thought it might be of interest for Dr. Starr to state the differential diagnosis. He had seen cases so closely resembling these that he thought they could all be classed under the same head.

DR. LLOYD had seen a number of cases of hysterical tremor which closely resembled the symptoms mentioned by Dr. Starr, and he was inclined to believe that there was hysteria in his case also.

DR. STARR stated that the affection was bilateral. He could not agree with Dr. Dana that it was a case of convulsive tremor. It was a question in his own mind whether the case was hysterical or not. He could find no trace of hysteria whatever in the case, although there might be; but he did not see why this should prevent these cases from being classified into certain groups.

(To be continued.)

CORRESPONDENCE.

LETTER FROM MUNICH.

The Hospital—Obstetrical Statistics—Prof. Winckel's Clinic.

The obstetrical and gynecological division of the hospital here has presented much of interest. The department is in a separate building, of modern construction, and as to light and ventilation, and in general appearance, seems to a cursory examination, entirely satisfactory. The University and Hospital are, like everything in Germany, under government supervision and regulation. There are over eleven hundred students, the medical course of study occupying five years—practically four and a half—and entrance to it must be from the gymnasium, the completion of the course there being guarantee of preparatory education. With the large number of students I have never seen together more than about fifty. It is not pleasant over here to hear the comments medical men make upon a system of education which permits a student to attend a gynecological or obstetrical clinic (if there be such) before he has finished his anatomy.

A few statistics from the official report of the obstetrical hospital may be of interest. The first may be novel: From May, 1884, to May, 1885, of 950 patients admitted, only 146 were married. In the following year, of 830 patients, only 68 were married.

From 1874 to 1883 there were 10,518 deliveries with 114 deaths; a mortality of 1.08 per cent. From 1883 to 1886, there were 2080 cases with 15 deaths; mortality

0.81 per cent. Of the deaths, 8 were from infectious and 7 from non-infectious diseases. The operations numbered 132—or 6.3 per cent. For a single year the operations were 61 in 941 cases, and presented the following:

Reposition of cord		6
Forceps:		
eclampsia,	1	
dilatation of cervix,	1	25
danger to mother,	2	
danger to child,	21	
Version (deformed pelvis, 3)		18
Perforation and cranioclasis		5

In the same year are reported 52 ruptures of perineum: of the first degree, 4; of the second, 45; of the third, 3. Also one laceration near the clitoris, giving rise to arterial bleeding. There were four cases of eclampsia, all recovered.

Of the 940 children, 106 died; subpartu, 60; fœtu macerat., 34; asphyxia, 4; rupture of uterus, 2; other causes, 6. Operations: forceps, 4; version, 5; perforation, 5—total 14.

Puerperal statistics: Of 950 cases, 707 were dismissed on the seventh day; after the seventh day, 213; sent to gynecological wards, 16; died within twenty-four hours of reception, 2. There were 242 cases of puerperal disease, among them: œdema of vulva, 44; puerperal ulcer, 107; partial gangrene of vulva, 2; cystitis, 3; parametritis lateralis, 29; bilateralis, 7; peritonitis, 4; pyæmia metastatica, 1; erysipelas, 3; phlebitis, ven. saph., 2; mastitis parenchymosis, 13; suppurative, 1.

The spray is not used during delivery, but every attention to disinfection by vaginal douches, and to cleanliness on the part of attendants is observed.

The departments of obstetrics and gynecology are under the care and direction of Prof. Winckel, and the lectures and courses of instruction are by him. The recent translation of his book on *Diseases of Women*, an honor it deserves notwithstanding the excellent works of our own countrymen, renders any introduction of him unnecessary. I witnessed his instruction in operative gynecology, of which two lessons of two hours each are given weekly. The soft parts are attached to, firmly sewed into, the phantom. Upon three such phantoms three parties of students performed the operations at once. One of the operations was total extirpation of the uterus per vaginam, and that it could be thus practised is sufficient evidence of the value of this method. It will be found described in *Archiv für Gynäkologie*, B. xxiii. H. 2. The soft parts are kept in a solution of corrosive sublimate and glycerine, and I was assured that careful record had been kept, and the observations showed that there had been no increase of puerperal diseases among women attended in labor by those students who were pursuing this course.

The operating hour is very early here—seven o'clock. I had the pleasure of seeing several operations by Prof. Winckel. The spray was used, but not thrown directly on the parts; a single apparatus threw its stream over and above patient and operator, and I was informed that outside of the hospital this would be dispensed with. The first case witnessed was extirpation of ovaries, or Battey's operation, for hemorrhage from a myoma. The patient was forty; the tumor somewhat larger than a cocoanut. The operator first scrubbed the abdomen with soap and brush, and disinfectant solution; then covered the abdomen, except the seat of operation, with soft towels wrung out of the solution. A colpeurynter was introduced into the vagina and distended with water, in order to raise the tumor out of the pelvis. Considerable difficulty was experienced, even after extension of the incision, in getting the tumor out of the abdomen, on account of its being very smooth and round. The colpeurynter was removed, and the tumor lifted up by the fingers of one hand in the vagina, and then turned out of the abdomen, great care being taken, of course, not to wound it. The ovarian pedicles were then tied with silk, and divided, the tumor afterward replaced in the abdomen, and the wound closed.

I also witnessed two ovariotomies, neither of which presented anything very extraordinary. The pedicle was transfixed and tied, no particular method or special "knot" being used, but it was efficiently done. Then, instead of cauterizing the part of the pedicle above the ligature, the peritoneum was drawn over it and stitched together with fine catgut. In one case the pedicle was quite short, and necessarily suffered some tension during ligation. Under such circumstances, Prof. Winckel emphasized the necessity of a careful inspection of the pedicle below the ligature for possible slight ruptures or lacerations which may give rise to consecutive hemorrhage. Such a tear was found in this case, and closed with fine catgut sutures.

After the laparotomies, the toilet of the peritoneum was very gentle and restricted. The abdominal wound was closed with silkworm gut sutures, introduced from without inward, and from within outward, the peritoneum and all the tissues of the wall included, and each one tied as soon as passed. The wound was then covered with pieces of iodoform gauze, aseptic cotton laid over the abdomen, and a wide roller bandage of loose material turned on.

I had the pleasure of seeing these three patients five or six days after the operations, with temperatures but little above normal, and doing well every way. No dressing of the wound is made until the seventh or ninth day.

I witnessed also an Emmett's operation. The "ectropion" was scarcely more marked than a number of cases seen in Italy, where the real nature of the lesion was not recognized. Prof. Winckel uses the scalpel altogether for paring, and closed the parts with silkworm-gut sutures introduced with an ordinary well curved surgical needle, just such as was used in closing the abdominal wound after laparotomy. These details are mentioned because great weight is laid by some upon the especial method of, or peculiar instrument for, certain operations, and this seems to be the case particularly in gynecology. R.

MUNICH, June, 1887.

PILOCARPINE POISONING.

To the Editor of THE MEDICAL NEWS,

SIR: About five years ago I saw a case of pilocarpine poisoning which I never thought of sufficient importance to report until I had read the account of Dr. Glinsky's case, quoted in THE MEDICAL NEWS of July 16th. The treatment being very different but the result the same, my case may have some value in connection with that

one. I was then a second-year medical student and my room-mate, a druggist, wishing to "break up a cold," asked my advice as to the best diaphoretic. Following my instructions he took two drachms of the fluid extract of jaborandi and went to bed. In about half an hour, when I followed him up-stairs, I found him suffering with the symptoms exactly as detailed by Dr. Glinsky—profuse perspiration and salivation, dimness of sight, prostration, a sensation of cold, tremors, and extreme general nervousness. I was too much frightened to take his pulse or temperature or note the state of the pupils. Comforting him with the assurance that I had never heard of any one's dying from the effect of jaborandi, I hastily consulted all the authorities at command, but without getting any help from them. While I was trying to decide what to do, all the symptoms suddenly passed off, excepting only the perspiration, which persisted, though in a moderate degree, for several hours. The duration of alarming symptoms was certainly not over an hour and a half, probably not more than an hour from first to last. No effect of the jaborandi was perceptible on the following day.

Dr. Glinsky's patient recovered promptly and thoroughly under the use of tannin, emetics, and atropine. Mine did equally well on nothing at all, and I think the suddenness of the improvement was as striking in my case as it could possibly have been in his. His treatment was rational and scientific, and, doubtless, under the circumstances, the proper thing to do; but that it was unnecessary, or, at least, that it would have been so in my case, I am sure.

EDWIN H. BIDWELL, M.D.

VINELAND, N. J., July 25, 1887.

DANGERS OF ANTIPYRIN.

To the Editor of THE MEDICAL NEWS,

SIR: Your editorial in THE MEDICAL NEWS of July 23d on the "Dangers of Antipyrin," comes very appropriately at this time to me, having just had an experience in the use of antipyrin which impresses me with the fact that it is a dangerous drug, especially when there are idiosyncrasies.

A few days since I prescribed antipyrin in seven grain doses in the form of capsules to a lady in good general health suffering from nervous headache, the ordinary remedies having failed to relieve her. She took the first dose, and reported to me that in a short time, within five minutes, it had such a distressing effect on her that she said she feared she would die. Roaring in the head, watery and suffused eyes, burning sensations about the neck and face, and what was the most alarming symptom, great uneasiness in the præcordial region, a feeling of constriction and inability to breathe were the conditions noted. The effects gradually wore off and the headache was relieved. A few days afterward a second capsule containing seven grains was taken for the same purpose and with the same results, only more intensified, as she reported.

Some days ago I saw the lady, and telling me that she was suffering from a headache, I gave her, much against her will, one-half of the seven grain capsule, making grains iiiss. It was but a few moments until all the unpleasant symptoms above described were seen: suffused eyes, roaring in ears, with burning sensation over neck and face, and the most marked evidence of cardiac depression and embarrassed respiration. The pulse being so feeble and frequent, and the other signs of collapse so marked, I felt the urgency of stimulating, which was accordingly done. Gradually these effects wore off, the last of the unpleasant symptoms to disappear being the constriction in the præcordial region. While recognizing antipyrin to be a valuable addition to the list of our new remedies, we cannot be too cautious in its use. I can but think that the dose ordinarily advised is too large.

Yours, etc.,

ALEX. H. WEIR.

WESTERN LUNATIC ASYLUM,
STAUNTON VA, July 23, 1887.

NEWS ITEMS.

A SANITARY CONVENTION will be held at Traverse City, Michigan, under the auspices of the State Board of Health, on Wednesday and Thursday, August 24 and 25, 1887.

THE NEW BRUNSWICK MEDICAL SOCIETY held its seventh annual meeting on July 19th and 20th, at St. John, Dr. P. R. Inches, of St. John, presiding. The following officers were elected for the ensuing year:

President.—Dr. P. R. Inches, of St. John.

Vice-Presidents.—Dr. B. S. Thorne, of Havelock, and Dr. J. H. Ryan, of Sussex.

Treasurer.—Dr. Thomas Walker, of St. John.

Secretary.—Dr. T. W. Musgrove, of St. John.

CHROME YELLOW IN "NOODLES."—A Philadelphia baker has been recently arrested by the Society for the Prevention of Food Adulteration on a charge of coloring "noodles" with lead chromate. "Noodles" as sold by this baker are cakes, not unlike the American doughnut, but are German in their origin.

THE SALE OF HOMŒOPATHIC REMEDIES BY DRUGGISTS.—The Austrian authorities refuse to allow druggists to sell homœopathic remedies, but limit the dispensing of such articles to homœopathic practitioners who follow the laws of homœopathy. The purpose of the regulation is to check the sale of proprietary preparations.

FRENCH AMBULANCE TRAINS.—The Railway Company of the West has recently equipped a model train for the transportation of sick and wounded soldiers, in time of war or of mobilization. It is so arranged that in time of peace it may serve the ordinary uses of transit; when a hospital train it will be under the care of the Red Cross Society.

The train in its different cars, when ready for use, will represent a well appointed hospital, with all the equipments for food, drugs, surgical supplies, and attendance which ingenuity can suggest. The apparatus for the easy support of the sick and wounded is also of the best.

THE SANITATION OF HEALTH RESORTS.—In a paper on the sanitary police of watering places and health resorts in France, presented to the French Society of Public Health, Dr. Bouloumie explains briefly why it is

that the present system of inspection and supervision of these plans, which in theory is quite elaborate and careful, amounts to nothing in practice.

The chief object of the local medical inspector or health officer at such a place is to get practice among the visitors, and to obtain this he needs the good will of the proprietor, the hotel-keeper, etc. He must be prepared at all times to certify to the excellence of the sanitary arrangements, to prove that the water is good, the sewerage superb, and that any alleged cases of typhoid are either not typhoid or have been contracted elsewhere.

It is, of course, quite different with the physicians of our own health resorts, but perhaps it will tend to keep them thoroughly conscientious and disinterested in their opinions if sufficient scepticism be maintained to demand additional evidence as to the healthfulness and sanitary condition of these places of public resort. We observe that even State boards of health are sometimes very reluctant to tell the truth to the public about the health resorts which are under their jurisdiction, so that it is no wonder that local health officers should lean—just a little.—*Sanitary Engineer*, July 9, 1887.

PROFESSOR KÖLLIKER, of Würzburg, recently celebrated his seventieth birthday and fortieth anniversary of his academic work. He was the recipient of distinguished honors, and the occasion was made by his friends and students a festival of three days' duration.

LUMINOUS PAINT IN THEATRES.—HERR STEHLE, the Government Inspector of the Royal Bavarian Court Theatre, has, according to *Iron*, given high testimony to the use of luminous paint as a safeguard against panic in theatres. Any explosion or disaster with gas leaves the exit passage of the theatre in total darkness, and even if additional oil lamps were used, they would probably be extinguished by the air concussion. In the above-named theatre inscriptions in luminous paint are suspended over the exit passages, which direct the audience to the "way out" (*Ausgang*). "These placards, in spite of being exposed to the very poor light of the corridors in the daytime and the gaslight in the evening, are so luminous after the gas has been turned out that anyone can gain the stairs in each corridor without difficulty." The precaution is so simple and inexpensive that we wonder it is not immediately adopted in all theatres. Indeed, we see no reason why its use should not be made compulsory. Surely some provision of this kind might be included in the Theatres Bill now before Parliament.—*Lancet*, May 14, 1887.

FLAVORING EXTRACTS—ARE THEY POISONOUS?—Cooks, confectioners, and others engaged in the preparation of foods and drinks are in the habit of using various artificial perfumes, which in chemical language are such bodies as amylic valerianate, amylic butyrate, ethylic butyrate, propylic ether, and caprylic alcohol. The odor and flavor of the apple, the pear, the pineapple, the strawberry, and the raspberry can thus be imitated. These imitations not only remove the necessity for the use of the natural fruits, but are less expensive, and, besides having perfect similitude with them, give the appropriate flavor in a more accentuated form. MM. Poincaré and Vallois have sought to ascertain whether these artificially prepared perfumes possess poisonous properties by injecting them under the skin of animals, as well as introducing them into the stomach. Dogs and guinea-pigs can withstand even large doses of these substances when injected under the skin; but these animals can be poisoned by sufficiently large doses, and then the symptoms set in rapidly. The most constant toxic symptom was great prostration, which was followed in a variable time by coma. These phenomena were less marked in the dog than the guinea-pig. All the animals were troubled with violent nasal irritation and sneezing, and distressed breathing was always evidenced by overaction of the respiratory muscles. An excessive secretion of mucus from the bronchial tubes was also noticed. Notwithstanding the gravity of the symptoms, the majority of the animals recovered. The practical outcome of these experiments is to sanction the use of infinitesimal doses such as are already employed for artificial flavoring of aliments.—*Zymotechnic Magazine.*

TRESPASSING PRACTITIONERS.—The *New York Medical Journal* of July 16, 1887, thus surveys the field of medicine, in which the medical men of different countries show a disposition to overstep limits prescribed by national boundaries:

The Chicago *Inter-Ocean* having complained, rather unnecessarily, we think, that the Canadians do not recognize American degrees as a title to practise in the Dominion, the Canada *Lancet* publishes a very judicious editorial article in which it sufficiently explains that in this fact there is no real occasion for ill feeling. It carries its frankness so far as to acknowledge that the better American schools are superior to those of its own country, but it adds, quite correctly, that there are other American schools which are so far below the Canadian standard that, without an invidious distinction being made, it is impossible for the Canadians to register American practitioners on the mere ground of the degree. On the other hand, the *Medical Press and Circular*, of London, grumbles about the number of German doctors who make incursions into the United Kingdom for the purpose of drumming up remunerative practice. Whereupon the *Deutsche Medizinal-Zeitung* pointedly remarks: "Und Mackenzie?"

HYPNOTIC EXHIBITIONS FORBIDDEN IN FRENCH THEATRES.—The municipal authorities of Bordeaux have forbidden the public exhibitions of two hypnotizers in one of the theatres of the city. The occurrence of accidents to those hypnotized occasioned the action.

ARTIFICIAL CLIMATES FOR INVALIDS.—In the belief that modern science can command climate, Dr. B. W. Richardson proposes that British invalids be given in their native isles the winter advantages of tropical resorts. This he would accomplish by establishing winter homes, or health palaces, each containing fifty or more comfortable two-story houses, enclosing a large square of ornamental grounds, and provided with libraries, baths, gymnasia, amusement halls, etc. Flower-lined galleries, giving long promenades, would extend over the houses under glass roofs, while the central enclosure would be shut in by an immense arch of glass at a great height above the ground. Suitable heating and venti-

lating apparatus would give an equable and adjustable temperature to all parts of the structures, and any desired character might be imparted to the climate. Even cloudy days need not be known, as electric suns could be made to shine at pleasure. In many places winter resorts on a grander scale might be created by putting whole valleys under roofs of glass, forming parks of constant beauty and healthfulness.—*American Analyst*, July, 1887.

MORTALITY AT THE PANAMA CANAL.—When this gigantic undertaking, which is gradually approaching completion, is finished, the medical history of the undertaking ought to be written. A statement was recently made, on apparently good authority, to the effect that the annual mortality amounted to the appalling percentage of 60 for the colored laborers and 80 for the white. These figures are very much greater than are justified by statistics, for, according to an official document recently published, the average annual mortality on the works does not exceed 10 per cent., but even this figure is fearfully high. Probably very few enterprises in modern times have proved as fatal to the men engaged as this one, a result which is attributable to the extremely unhealthy nature of the climate and also to the insanitary conditions under which these large aggregations of men have had to live. The mortality at the commencement of the excavations was still higher, but the company has recently become alive to the fact that this high rate of mortality is very expensive, and have, therefore, taken some steps to render the dwellings and manner of living of the men less prejudicial to health and life. Unfortunately the disease and mortality statistics of such undertakings are almost invariably kept in a very perfunctory style. It would have been very instructive to have had some information with respect to death from disease and accident among the men employed in carrying out the recent metropolitan improvements. It would probably have been made apparent that the soil of old cities like London cannot be disturbed on a large scale without a corresponding tribute of mortality. The tunnel which is shortly to be driven beneath the Thames offers an excellent opportunity for the collection of precisely this kind of information.—*British Medical Journal*, July 9, 1887.

A VETERAN ANATOMIST.—On April 30th, at 11 A.M., the Anatomical Theatre of the Imperial Medico-Chirurgical Academy of St. Petersburg was the scene of a lively and noteworthy gathering of physicians, surgeons, students, and deputies from numerous learned societies, lay and medical, from every part of Russia, to congratulate Professor Wenzell Gruber upon his having held the professorship of practical anatomy for no less a period than twoscore years. During that time Dr. Gruber, besides having instructed, examined, and passed 8000 medical students in practical anatomy, has himself dissected, or superintended the dissection of, upward of 30,000 bodies. His talents, when Hyrtl's demonstrator in Prague (from 1844 to 1847), having been noticed by the late Prof. Pirogoff, he was invited by the eminent Russian surgeon to St. Petersburg, where he at once received the appointment of Demonstrator of Anatomy at the Imperial Medico-Chirurgical Academy.

From various parts of the world there were eighty telegrams sent to the veteran anatomist, while upward of twenty gorgeously illuminated and bound addresses from different societies congratulated him on the completion of his fortieth year of professorship. A large gold medal, struck in his honor, was presented to him, while a copy of it in silver was struck for and presented to Mrs. Gruber. On one side of the medal are the Christian and family names of Gruber, and below a very good likeness of him; the finely shaped oval head, the high and full brow, the thick, bushy head of hair, and the rounded and beautifully chiselled chin are admirably portrayed by the sculptor. The reverse of the medal presents, in its centre, the large Roman numerals XL.; below the inscription is 1847–1887; while above is written: "To the teacher of 8000 Russian surgeons." A splendid album, containing upward of sixty original paintings in oil and water-colors, was presented to him by some of the first artists in Russia. The emperor created him a Knight of the White Eagle, one of the highest of Russian orders. Indeed, there was no end of telegrams, addresses, memorials, and speeches—all tending to show how deeply respected and beloved Gruber is, alike by colleagues, pupils, and the public in general. So remarkably prolific a writer is Gruber that during forty-three years, the number of his published anatomical memoirs and pamphlets exceeds 540—a proof that the anatomists of a bygone age were generous enough to leave something for their followers to do and discover.—*Lancet*, July 9, 1887.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 26 TO AUGUST 1, 1887.

MAGRUDER, D. L., *Colonel and Surgeon*.—Granted leave of absence for one month, to take effect on or about August 10, 1887.—*S. O. 170, A. G. O.*, July 25, 1887.

MCCLELLAN, ELY, *Major and Surgeon*.—Detailed as a member of a board of survey, to meet at the Medical Purveying Depot, St. Louis, Mo., on August 1, 1887.—*S. O. 173, A. G. O.*, July 28, 1887.

CALDWELL, D. G., *Major and Surgeon*.—Order relieving him from duty at Fort D. A. Russell, Wyoming Territory, and assigning him to duty at Fort Assiniboine, Montana Territory, is revoked.—*S. O. 168, A. G. O.*, July 22, 1887.

CLEARY, P. J. A., *Major and Surgeon*.—Ordered to Fort Assiniboine, Montana Territory, instead of Fort D. A. Russell, Wyoming Territory.—*S. O. 168, A. G. O.*, July 22, 1887.

BURTON, H. G., *Captain and Assistant Surgeon*.—Sick leave of absence extended three months.—*S. O. 171, A. G. O.*, July 26, 1887.

GARDNER, E. F., *Captain and Assistant Surgeon*.—Ordered for duty at Fort Reno, Indian Territory.—*S. O. 170, A. G. O.*, July 25, 1887.

MCCAW, W. D., *First Lieutenant and Assistant Surgeon*.—Ordered for temporary duty at Fort Riley, Kansas.—*S. O. 78, Department of Missouri*, July 25, 1887.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*